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JOURNAL OF THE
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JANUARY 1982

FOR CME
CREDIT
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Better, Quicker Service!

That's Our Pledge! As We

Assume Administration Of The

IMS Statewide Physicians

Group Health Program.

Beginning in 1982, The Prouty Company is taking over administration of this Blue Cross/Blue Shield coverage for IMS member physicians.

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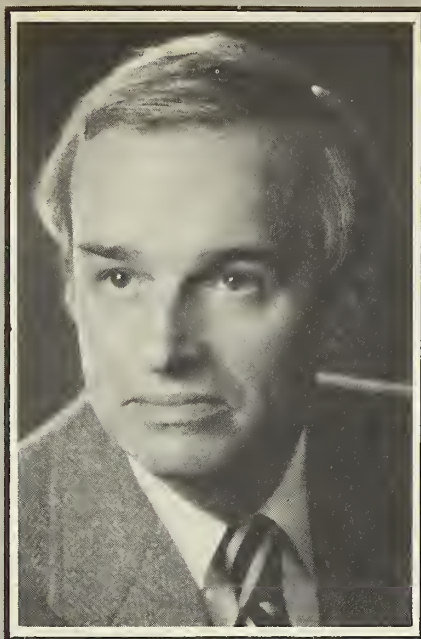
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PRESIDENT'S PRIVILEGE



THE IDEA of requiring Iowa physicians to obtain and report certain amounts of continuing education each year is ludicrous, according to many medical colleagues. Obviously, any practitioner worth his/her salt is going to keep up on developments in his/her area out of a sense of professional responsibility for good patient care, not out of a threat of license withdrawal.

An Iowa survey several years ago demonstrated the amount of continuing medical education obtained by our physicians far exceeded the limited CE requirements imposed by the Board of Medical Examiners. And satisfyingly, according to reports from the Board of Medical Examiners, no action has been needed to revoke any license for failure to meet the education stipulations. This is true for the nearly three years since the requirement became effective.

Everyone knows there are abundant education opportunities open to Iowa physicians. Some are in distant places, some in your own backyard. And the quality of the offering is not necessarily related to travel distance. Speaking of close-at-hand CME, one opportunity is just a few pages back. By reading the accompanying study of cholecystectomy in Iowa and completing the short quiz, you can earn an hour of Category I credit for 1982. Nearly 100 IMS

members completed a quiz on hysterectomy in the September *Journal*.

I would mention 5 hours of Category I credit will be available in March at the IMS Sports Medicine Conference. And probably about 12 hours will be offered at the IMS Scientific Session in Iowa City April 6-8. These are but several examples of what's happening educationally in Iowa. The U. of I. and other Iowa accredited CME institutions are providing worthy education programs.

CME participation can help you serve your patients better. Secondly, it'll help you meet the legal requirements.

A stylized, handwritten signature of John H. Kelley, M.D., in dark ink. The signature is fluid and cursive, with a large initial 'J' and 'K'.

John H. Kelley, M.D.

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JOURNAL OF THE IOWA MEDICAL SOCIETY

JANUARY 1982 / VOLUME 72 NUMBER 1

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ABOUT THE COVER — Our January cover calls attention to the third in a series of Continuing Medical Education/Shared Study Reports prepared by the Iowa Foundation for Medical Care and presented in cooperation with the University of Iowa and the Iowa Medical Society. A brief quiz provides the opportunity for member physicians to earn one hour of Category I CME credit.
COVER DESIGN: Jill Carey

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FEBRUARY 1982 / VOLUME 72 NUMBER 2

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ABOUT THE COVER — Vascular technologist Ann Hoel performs oculoplethysmography on a patient at St. Joseph Mercy Hospital in Mason City. This non-invasive screening test is used to detect internal carotid artery stenosis. It is a relatively inexpensive procedure available on an outpatient basis. The Mason City program is described beginning on page 57.

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JOURNAL OF THE Iowa medical SOCIETY

MARCH 1982 / VOLUME 72 NUMBER 3

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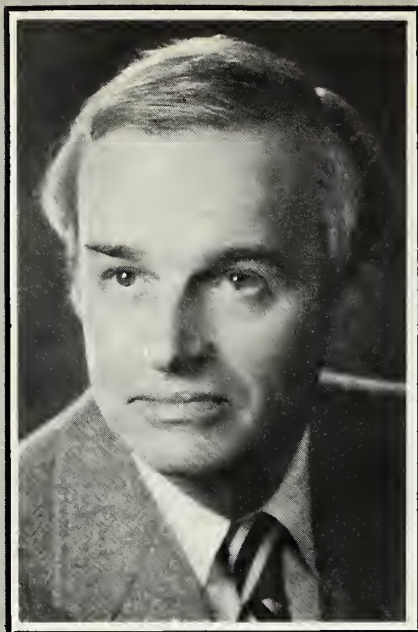
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ABOUT THE COVER — Shown on the cover is your free ticket as an Iowa Medical Society member to the 1982 Scientific Session to be held April 6, 7 and 8 in Iowa City. This year's full program appears in a special supplement in this issue. The diversified 3-day event will appeal to a wide variety of interests of both physicians and their spouses.

PRESIDENT'S PRIVILEGE



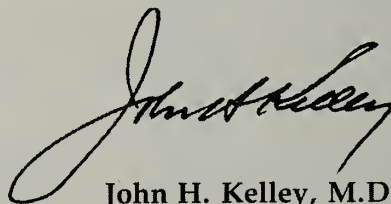
AN EDITORIAL by George Crile, M.D., was recently reprinted in the DES MOINES SUNDAY REGISTER. In recent years, Dr. Crile has been an outspoken critic of medical practice in the United States. He usually swings wildly at a great variety of medical idols and occasionally he hits his mark. This editorial was written originally for the national Blue Cross house organ. It is a disappointment.

"The problem of the high cost of (i.e., medical) care," he writes, "stems from the way most surgeons are remunerated." He feels that fee-for-service physicians operate too often and sometimes on patients they are not qualified to treat.

Basically, George Crile implies that physicians are not completely honest and the only way to curb their avarice is to put them on a salary. However, if doctors operate primarily for selfish reasons, one wonders how we are going to get greedy doctors to operate at all when they are on salary as he proposes. If a surgeon operated with his pocketbook in mind, then a salaried surgeon would rarely operate for essentially the same reasons. One might argue further that if physicians are motivated primarily by money then salaried physicians have little incentive for excellence. Of course, this is all nonsense because physicians, like everyone else in society, try to do good work. Unfortunately, there are those who put all their faith in laws, regulations and

restrictions and, in this case, Dr. Crile seems to be one of those planners. "All we need to do is to have the government pass legislation that prohibits hospitals giving operative privileges to any more fee-for-service surgeons," Crile writes. We don't downgrade salaried physicians, but we are highly suspicious of health planners who propose a monolithic way to deliver health care. The strength of our health care system in the United States lies in the fact that we don't have a single system. Instead, we have a great variety of options for health care, i.e., private hospitals, proprietary hospitals, veterans hospitals, HMO's, state hospitals, clinics, etc., all competing and each in some way superior.

Let's not try to eliminate the competition, instead let's try to beat the competition. That's what's unique about American medicine.



John H. Kelley, M.D.

P.S. I commend to you a review of the 1982 IMS Scientific Session program, which is in this issue. Your attendance would be a good investment of time.

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APRIL 1982/VOLUME 72 NUMBER 4

UNIVERSITY ISSUE

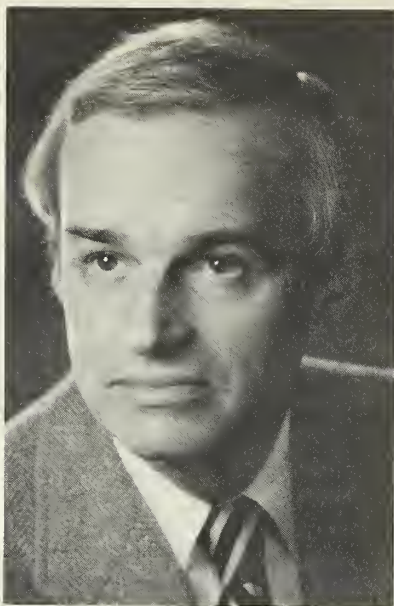
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ABOUT THE COVER — Lewis E. January, M.D., professor emeritus of internal medicine at the U. of I. College of Medicine, and Joyce A. Gilbert, St. Charles, Ill., senior in medicine, examine "Harvey," a mannequin that can simulate many cardiac diseases. The mannequin, only the twelfth to be manufactured, is an educational feature of the new U. of I. Cardiovascular Center. Francois Abboud, M.D., describes the Center in the Questions-Answers feature beginning on page 142. (University of Iowa Photo by Drake Hokanson.)

PRESIDENT'S PRIVILEGE



IOWA PHYSICIANS are talking a good bit these days about what they perceive as a developing doctor surplus. This concern is fueled by stories out of places like Portland or San Francisco where the ratio of doctors to population is 4 to 5 times greater than Iowa.

At its December interim session, the AMA House of Delegates adopted a manpower policy statement and said, in doing so, that the topic should remain under continuing study. The several new AMA manpower principles declared basically that the dynamic forces of the marketplace should determine the production and distribution of medical manpower — with emphasis on quality care. This AMA statement downgrades regulation, supports market incentives, calls for the AMA to help physicians adjusting to changing circumstances, advocates medical school adherence to acceptable educational standards and self-determination as to the number of students, etc.

Actually, the Iowa manpower picture is quite positive. In support of this assertion, I invite you to read the paper in this issue by Dr. Seebohm, executive associate dean at the U. of I. College of Medicine. Dr. Seebohm offers data showing the improving medical manpower picture. He adds there is little chance the

number of Iowa physicians will very soon exceed the realistic needs of our population.

In summary, we appear to be progressing intelligently with respect to medical manpower in Iowa. This is not to say we are without local physician shortages in certain specialties. Our Iowa goal should be to produce a doctor-patient ratio which assures patients good access to care and physicians adequate caseloads to maintain skills and achieve an adequate livelihood. In the process we also want to foster a professional climate where early and appropriate referrals can occur.

Studies show physician fees and per capita medical cost in Iowa are below the national average. And Iowa, too, is a place where quality has a priority status. In short, it really is a pretty good place to be, either as a recipient of care or a provider.

A stylized, handwritten signature in dark ink, reading "John H. Kelley".

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JOURNAL OF THE IOWA MEDICAL SOCIETY

MAY 1982 / VOLUME 72 NUMBER 5

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ABOUT THE COVER — This month's cover dramatizes the scientific article on page 193 and shows a large lung tumor needing mediastinoscopy for staging. The paper describes this as an effective method of diagnosing both benign and malignant diseases of mediastinal nodes. Photo credit: Steve Davis, Iowa Methodist Medical Center.

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JOURNAL OF THE Iowa medical SOCIETY

JUNE 1982 / VOLUME 72 NUMBER 6

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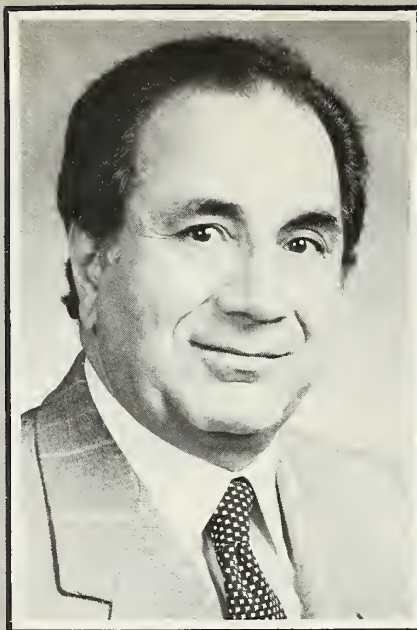
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ABOUT THE COVER — What Iowa physicians are thinking right now on key medical topics! See the special insert in this issue for the reactions of Iowa doctors on health care delivery systems, health care costs, the appropriate use of inpatient services, etc. The findings are of interest.

PRESIDENT'S PRIVILEGE



MY FIRST COMMENTS in this space are made just after the 1982 IMS House of Delegates has adjourned. I feel really good about what transpired. Aside from the honor of becoming president, I think the issues discussed and the actions taken reflect a genuine concern for the welfare of man.

The statement of the 1982 House abhorring warfare — whether it be nuclear, chemical, bacteriological or conventional — exemplifies the commitment about which I speak. Other House actions similarly demonstrate the profession's desire for an optimal lifestyle. I refer to policy statements discouraging tobacco usage; promoting an injury-free environment for high school athletes; urging development and use of restraint equipment in motor vehicles; advocating CPR training in the schools, etc. These actions are in keeping with basic IMS policy favoring education, persuasion and voluntarism.

Additional IMS House actions spoke more directly to policies and procedures associated with the delivery of medical care in Iowa. These new or reaffirmed policies originated mostly as local (county-level) petitions, came

forward for discussion and debate, then completed the representative process with a vote by the 145-plus physicians seated for the concluding House session.

A dream to be pursued is that every Iowa physician might either observe or, better yet, actually participate in a meeting of the House, of the type we have just experienced. Realization of this wish would heighten immeasurably our understanding of the worthiness of what takes place.

Short of achieving this dream, it is up to the leadership of the Society, and to all of those of us serving as delegates, to relay to all of you the essence and the content of these key meetings.

Hormoz Rassekh, M.D.
President

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JULY 1982/VOLUME 72 NUMBER 7

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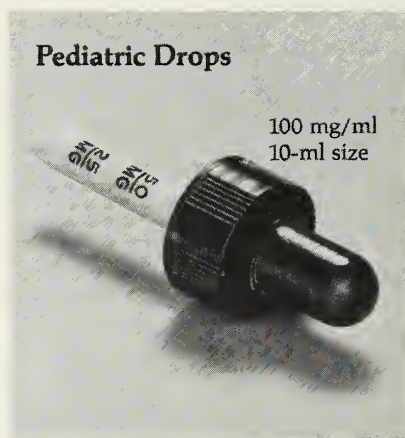
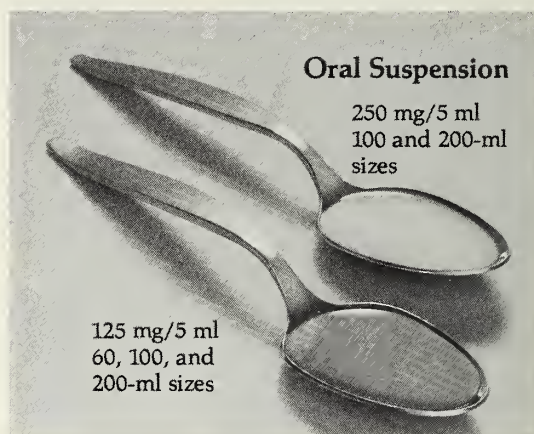
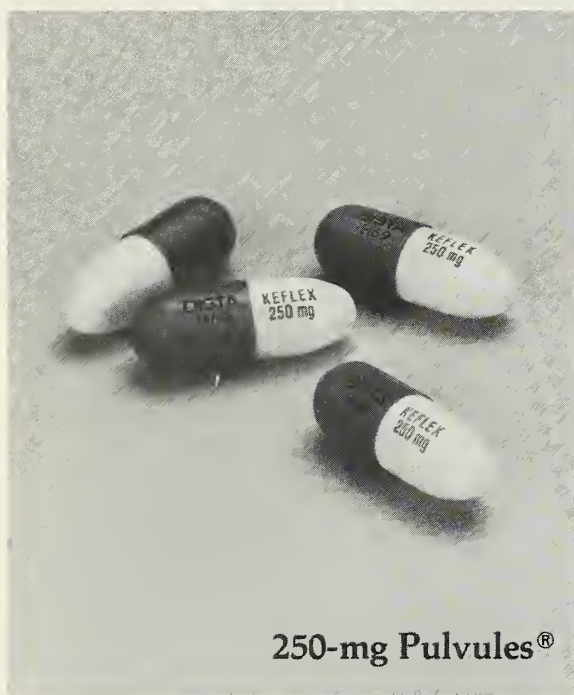
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ABOUT THE COVER — Roy M. Pitkin, M.D., Iowa City, is shown with plaque signifying his receipt of the 1982 Joseph B. Goldberger Award in Clinical Nutrition from the American Medical Association. The award was presented June 13 at the AMA House of Delegates. Dr. Pitkin is head of the Ob-Gyn Department at the University of Iowa College of Medicine. The award includes a \$1,000 stipend and recognizes Dr. Pitkin for more than 15 years of research in the transfer of nutrients to the fetus, and the fetal effects of maternally administered compounds. Dr. Pitkin is a native of Anthon, Iowa and has the B.A. and M.D. degrees from the U. of I.

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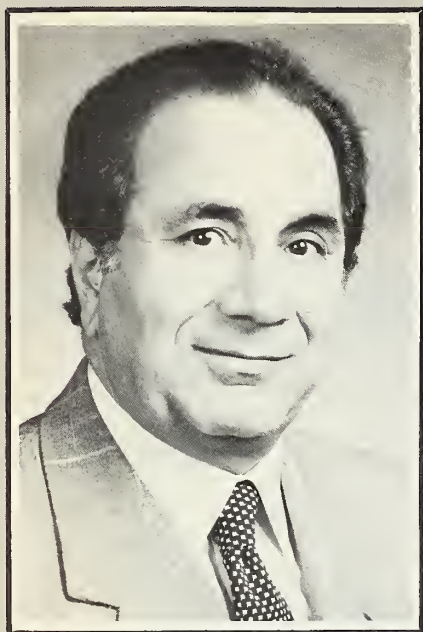
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ABOUT THE COVER — The 52-doctor Medical Associates Health Maintenance Organization in Dubuque expects to greet its first patient this month. Now the third HMO to operate in Iowa, the Dubuque plan differs in not having an IPA affiliate. A certificate of authority was granted in July by the State Insurance Department with enrollees expected from Iowa, Illinois and Wisconsin; 4,000 participants are estimated at the end of a year.



PRESIDENT'S PRIVILEGE

A PERSONAL COMMITMENT

Medicine is not only a science; it is also an art. It does not consist of compounding pills and plasters; it deals with the very processes of life, which must be understood before they may be guided. — PARACEL-SUS (1493-1541)

THIS STATEMENT is as valid today as when it was made 400-plus years ago. To understand the processes of life and treat with confidence and compassion, a physician is obliged to be a lifelong learner. So saying, the questions follow, how best does one learn? what does one learn? and how is this learning to be measured? Obviously, there are a myriad of ways to learn and to measure learning.

In June the AMA House of Delegates adopted an extensive report on "Future Directions for Medical Education." The report has a section on continuing medical education which speaks of lifelong learning as necessary to professional competence. It notes that CME for most of this century has been a voluntary process. It describes competence as a combination of knowledge and performance. But, and rightly so, the AMA material ponders how competence is to be measured scientifically. This CME section of the report ends with two recommendations:

(1) The medical profession should continue to encourage participation in CME related to the physi-

cian's professional needs and activities. Efforts to evaluate the effectiveness of such education should be continued.

(2) The medical profession and the public should recognize the difficulties related to an objective and valid assessment of clinical performance. Research efforts to improve existing methods of evaluation and to develop new methods having an acceptable degree of reliability and validity should be supported.

These recommendations should be of interest to Iowa physicians. They are thoughtfully conceived and important to all of us. Whatever the future may hold as to educational requirements — governmental or otherwise — the assurance of professional competence is related directly to the individual commitment of the physician. To be sure, continuing education represents a commitment of time and money. These are matters of considerable importance today. But what it really all boils down to is how deeply rooted is our desire to provide optimum patient care.

Hormoz Rassekh, M.D.
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ABOUT THE COVER — As noted in the book, *ETERNAL EVE*, by Harvey Graham (Doubleday & Company, Inc., 1951), the first printed illustration of a Cesarean birth appeared not in a medical book but in the lives of the 12 Caesars by Suetonius. The first printed edition of this book was in 1506; it was written in the second century A.D. The original is reported to be part of the Radford Collection in the Medical School at Manchester. This historical note is joined for interest with this month's material on Iowa Cesarean births.

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ABOUT THE COVER — Patient Marcia Decker of Des Moines arrived at the Surgery Center of Des Moines at about 7:30 a.m. on a recent Tuesday morning. She had her surgical procedure and is shown here in the discharge area with Staff Nurse Jan Forte, R.N., about two hours later. She is a short time away from going home. More about the Surgery Center appears on page 401.

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ABOUT THE COVER — It has been a tradition of about five years to include as part of the November issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY a special insert of interest and potential value to patients. The 1982 insert is called "What You Can Do to Help Your Doctor Help You!" Additional copies of the insert are available to physicians wanting to provide them to patients. An order form is furnished for this purpose on page 443.

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JOURNAL OF THE IOWA MEDICAL SOCIETY

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ABOUT THE COVER — The new \$36 million Marian Health Center was formally dedicated in downtown Sioux City in October. The project was begun in 1979. The new facility is called a major referral center for 19 counties in Iowa, Nebraska and South Dakota. The 476-bed center is one of 16 hospitals in the Sisters of Mercy Health Corporation. It is one of the five largest hospitals in Iowa. An early surgical procedure is shown in the small photo. Pictures courtesy John Rodeen, Director, Public Relations, Marian Health Center.

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A REPUTATION YOU CAN RELY ON.



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This is the third in a series of Continuing Medical Education/Shared Study Reports. It is based on a study of 1,853 cholecystectomies in 60 Iowa hospitals. No tendency toward "unnecessary surgery" is revealed in the study. Mortality and morbidity rates are in line with reports in the general literature. Preoperative hospital stays and the length of operating time are areas which may benefit from medical staff consideration.

You will find a special orange-colored, one-page insert following this report. It has an 8-question quiz. By completing and mailing it with \$3 to the Iowa Foundation for Medical Care you may earn one credit hour in Category I for the Physician's Recognition Award of the American Medical Association. The quiz will be evaluated and returned to you with appropriate comments.

This education project is a joint service of the Foundation, the University of Iowa College of Medicine and the Iowa Medical Society.

Cholecystectomy: An Evaluation of Care in Iowa

CHARLES E. DRISCOLL, M.D.,

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THE TRUE INCIDENCE of biliary disease is unknown because all patients with symptoms do not consult a doctor. Additionally, 30 to 50% of all patients with gallstones are asymptomatic.¹ It is estimated that gallstones are present in 12 million women and 4 million men in the United States. Annually in this country, there are 800,000 new cases of gallstones being discovered and about 400,000 gallbladders being removed, with an expenditure for gallstone illness approximating \$1.5 billion.² In Iowa, Health Service Data System (HSDS) figures indicate there are 4,430 cholecystectomies in a population of 2,915,157, yielding an incidence of 0.15% in patients discharged during the year of 1978.³

The physician authors are members of the Continuing Education Committee of the Iowa Foundation for Medical Care. Dr. Driscoll serves as chairman.

In 1977, the Iowa Foundation for Medical Care (IFMC), the state's professional standards review organization, undertook a study of the sixth most frequently performed surgical operation, cholecystectomy. Because periodic statements in medical and lay literature refer to the excessive cost of "probably unnecessary" surgery,⁴ one of the study objectives was to assess whether Iowa's cholecystectomies are performed for appropriate reasons. A second objective of the study was to evaluate the quality of cholecystectomy care and to see if major adverse effects of the surgery are more likely to occur in a primarily rural state such as Iowa when compared to published data. Table I outlines the characteristics of the sample under study. Sixty (45%) of 132 Iowa hospitals participated voluntarily in the study. The various criteria under investigation in the study will be discussed individually.

CME/SSR No. 3 in a Series

CRITERION No. 1: ALL CHOLECYSTECTOMIES SHOULD BE ACCOMPANIED BY A "POSITIVE" PATHOLOGY REPORT

In view of current assertions about "unnecessary surgery," the Committee believes some form of gallbladder pathology should be documented to justify the cholecystectomy. 49 variations to this criterion were reported in 21 of the 60 participating hospitals. Spread over all hospitals, this yields a variation rate of 3%. Even if none of these variations were justified, the variation rate remains below the range of error of the standard means of diagnosis, the oral cholecystogram. Under optimum conditions, when no acute symptoms are present, the oral cholecystogram is more than 95% accurate.² There is a 2 to 3% false negative rate of oral cholecystograms,¹ and a 5% false positive rate (non-visualization, yet the gallbladder is normal).² Based on these clinical grounds alone, a false positive diagnosis of biliary disease is made 5% of the time.⁵ So, to have a normal gallbladder identified on the pathology

TABLE I
CHARACTERISTICS OF THE SAMPLE STUDIED

	Number	
Hospitals Participating*	60	
Physicians Performing Surgery	326	
Patients in the Study	1,853	
		Percent
Females	1,332	72
Males	398	21
Sex Not Reported	123	7
Age 20 & Under	27	1
21-39 Years	519	28
40-59	594	32
60 & Over	604	33
Age Not Reported	108	6

* Range: 20-700 beds

Mean: 114 beds per facility

report in fewer than 5% of cholecystectomies studied is a laudable achievement. When one takes into account the review process of the local hospitals, which we consider valid, 42 of the 49 cholecystectomies having a negative pathology report were considered justified. The rate of non-justifiable cases drops to an impressively low 0.4%.

In a related finding, 7 cholecystectomies were performed with a pathologic report indicating cholelithiasis only. This represents 0.4% of the cholecystectomies in the study and may indicate the number performed for asymptomatic gallstones. The literature describes 3 indications for prophylactic cholecystectomy in patients with asymptomatic gallstones.¹ The indications are: 1) diabetics, because their mortality from acute cholecystitis is 2 to 3 times greater than the general population; 2) patients with non-functioning gallbladders or an asymptomatic stone larger than 2 cm in diameter, because their incidence of complications is considerably higher than the general population; and 3) patients with calcified gallbladders, because this group has a high incidence of carcinoma of the gallbladder. Altogether these 3 indications encompass slightly less than half of the patients with asymptomatic gallstones and represent about 30% of all people with stones. Various sources report between 60 and 75% of the patients with asymptomatic gallstones will later become symptomatic. In view of these facts, we believe Iowa physicians are to be commended for resisting unnecessary surgery where no clear-cut indications exist.

CRITERION No. 2: NO SWELLING, ERYTHEMA, OR SIGNIFICANT WOUND DRAINAGE SHOULD EXIST WITHIN 48 HOURS OF THE PATIENT DISCHARGE

There were 90 variations to this criterion, with 67 believed to be justified by the local medical care evaluation committees. When local medical care evaluation committees were unable to find documentation in the records they assumed no infection was present. Obviously, this reasoning is open to question, and it is apparent some justified cases probably had wound complications. On the other hand, there were some non-justified deficiencies reported that may not have had a wound complication at all. The lack of documentation jeopardizes the validity of the data and makes it impossible to assess accurately the true wound complication rate.

However, consider this question, "If all the variations reported represented wound complications, would this then be a significant problem with cholecystectomy care?" Probably not. A relatively "clean" operation such as inguinal herniorrhaphy produces an overall wound infection rate of 5.2%.² Technically, cholecystectomy is more difficult than herniorrhaphy, may require T-tube drainage, and is likely to be initiated by obstruction in association with contaminating organisms. If we assume none of the 90 variations to Criterion No. 2 to be justified, the overall wound complication rate would be 3.6%, considerably better than what might be expected from wound infection alone.

CRITERION No. 3: THE EXPECTED LENGTH OF STAY FOR CHOLECYSTECTOMY IS LESS THAN 10 DAYS

535 variations (29% of the sample) were reported. In addition, 85 patients (5% of the sample) met the exception of common duct exploration which allowed 4 additional postoperative days. After local committee review, 490 cases of extended stay were believed to be justified, while 45 cases were not excused. 23 of the 45 unexcused extended stays gave no documentation or reason in the medical record for the longer than expected stay. Because the number of variations was unusually large for this criterion, specific practice patterns were looked for that might reduce the length of stay. Of the various reasons for extending the length

of stay (i.e., preoperative work-up, diagnostic difficulty, pre- or postoperative stabilization of the patient, or dealing with postoperative complications), only the preoperative hospital work-up seemed open to modification. Some local review committees believed this aspect of the care could be done just as appropriately on an outpatient basis.

In an April 1980 IFMC newsletter, data were presented to show the mean number of preoperative stays for 11 selected procedures.⁶ The Iowa preoperative stay averaged 3.9 days, compared with 3.8 days nationally. Because of increasing health care costs, the factors of insurance coverage or patient desire are no longer sufficient to justify a preoperative in-hospital work-up prior to cholecystectomy when the patient is not ill enough to require such care. Iowa hospitals are urged to pay close attention to cases where costs are unnecessarily increased by inpatient work-up of the non-acute patient; steps need to be taken to reduce these occurrences. Iowa physicians can offer positive leadership in reducing the preoperative extended length of stay.

CRITERION No. 4: TRANSFUSIONS SHOULD BE UNNECESSARY EXCEPT WHERE PREOPERATIVE ANEMIA DICTATES BLOOD REPLACEMENT.

Operations on the biliary tract are followed by a variety of complications peculiar to the difficulty of surgical dissection. Intraoperative and postoperative hemorrhage may result because of variations in the origin and location of the arterial blood supply to the gallbladder. Variations in the arterial anatomy are common and perhaps as frequent as one in 10 humans.² Transfusions can be expected to be necessary in 3.7% of cholecystectomies.⁷ In our study, 62 patients (3%) required intraoperative or postoperative transfusion. When looked at with regard to specific indications for transfusion, these findings are even more commendable. Only 12 cases with intraoperative blood loss required transfusion; 26 cases experienced postoperative hemorrhage related to surgery. The remaining transfusions were given for indications unrelated to the cholecystectomy. The performance of Iowa physicians with regard to transfusion of blood in cases of cholecystectomy is better than the literature suggests.

(Please turn to page 8)

CRITERION No. 5: THE LENGTH OF OPERATING TIME FOR A CHOLECYSTECTOMY SHOULD BE EQUAL TO OR LESS THAN 2 HOURS

Operating time contributes directly to surgical complications and infections. Cultures taken from surgical wounds in a large cooperative study of "clean" operations showed a gradual build-up in the number of bacteria recovered up to 3 hours, at which time there is a leveling off.² Operating room time should seldom exceed this 2-hour time period even when operative cholangiograms are performed. Two and a half hours operative time was allowed as an exception for common bile duct exploration; 40 patients (2%) in our sample met this exception. Our findings indicate that 177 (10%) of the patients in our study had operative times in excess of 2 hours. In 161 of these instances, or 91% of the total, the time extension was be-

**CME/SSR
No. 3 in a Series**

lieved to be justified. In 16 cases (9%) the extended operating time was believed to be unnecessary. Ten of these 16 cases appeared at one hospital, and the local review committee noted the surgeon has left the staff. There was no relationship between consistently prolonged operating times and the teaching activities of a hospital. The median number of minutes of operating time in excess of that expected was 57 minutes. In the entire study a total of 726 operative cholangiograms was performed, and in the subset of cases with prolonged operative time, there were 44 instances of documented operative cholangiogram.

The Continuing Medical Education Committee recognizes that many valid situations required more than the arbitrary 2-hour surgical time and were justified because of "additional surgery," "operative difficulty," and "condition of the patient." It is hoped all hospitals will continue to scrutinize this factor closely in surgical procedures and take action when appropriate.

TABLE II
CAUSES OF DEATH RELATED TO CHOLECYSTECTOMY

Myocardial Infarct/Cardiac Arrest	5
Pulmonary Embolus	4
Congestive Heart Failure	3
Cerebrovascular Accident	2
Pneumonia	2
Renal Failure	1
Postoperative Aspiration	1
Sepsis	1
Small Bowel Infarction	1
Cause not identified	3
Total	24

Age Distribution						
Age Unknown to IFMC	>80	70-79	60-69	50-59	40-49	<40
9	7	4	2	0	2	0
Total — 24						

CRITERION No. 6: THE EXPECTED OPERATIVE MORTALITY FOR CHOLECYSTECTOMY IS 0%

The mortality of cholecystectomy is reported in the literature to range from 5 to 10% and is confined to patients over 60 years of age with serious associated diseases.¹ Morbidity and mortality are influenced by the timing of the operation. Elective operation has a morbidity of 6% and a mortality of approximately 0.5%, while emergency operation has a morbidity of 20% with a mortality of 5%.² In actual practice during the year 1972, a Professional Activities Study (PAS) indicated a mortality rate of 1.4%.⁸ Several factors distinguish classes of patients in whom the death rate is expected to be higher. Age is the major variable affecting mortality, with nearly all patients who succumb to complications over age 60 and with those over age 70 having even higher mortality. Diabetes carries with it a higher incidence of suppurative complications and accounts for an increase in the mortality rate to approximately 20%.

In this study, 24 patients died while hospitalized for cholecystectomy. The cause of death and the distribution of ages are reported in Table II. The overall mortality rate for this study (1.3%) is between the range of 0.5 to 1.4% expected for elective cholecystectomy. An important point to remember is that our sample represents a mixture of cases of elective and emergency surgery. Three hospitals had identical death rates of 2 in 50 cases and one hospital had 2 deaths in 29 cases. In this latter hospital, both patients succumbed postoper-

actively to cardiac arrest and acute arrhythmias, suggesting the need for a careful look at anesthesia and postoperative recovery practices. In 3 hospitals, documentation was so poor the cause of death was undeterminable. Any hospital death should be considered a learning experience for the medical staff with careful attention paid to preventive measures.

CRITERION No. 7: THE COMPLICATION OF WOUND INFECTION IS NOT EXPECTED TO OCCUR

As previously mentioned under Criterion No. 2 (wound complications), a certain number of infections are, in fact, to be expected. One might expect that in "clean" operations the operative wound might theoretically be sterile, but this is not the case because skin cannot be sterilized and bacteria will be found in most wounds. In one study of 350 wounds in "clean" operations, a bacterial growth rate of 68% resulted from wounds cultured at surgery.² The surgeon must, therefore, assume that all operative wounds will contain bacteria. Certain specific and general factors will determine which wounds become clinically infected and which will resist infection by natural defense reactions. The most obvious factor is host resistance. Those patients who are elderly or who have complicating illnesses will have a higher infection rate. The duration of hospitalization preoperatively is related and is pertinent to our present study. A cooperative study group reported that an infection rate of 6% occurs in patients hospitalized 2 days or less, while the infection rate for those hospitalized 3 weeks or more before the operation was 14.7%.² From this relationship one might infer that the shorter the preoperative stay, the less likely postoperative infection will be.

Eighty-three variations to this criterion were reported. Of these 83 cases, 68 were believed to be "justified." It is hard to imagine how a postoperative wound infection might be felt to be "justified," but in one of these cases a logical reason was found: "The wound was contaminated with the patient's repeated meddling with the incision postoperatively." Unacceptable to the CME Committee was a reason for justification cited in 37 cases: "Justified because proper critical management was undertaken." This represents failure to recognize the

intent of medical audit and interjects a confounding variable in attempting to assess the actual rate of infection in this study. At best, we can say 52 cases of wound infection were not appropriately justified, yielding an infection rate of at least 2.8%. The CME Committee is pleased only one case of infection occurred in any single hospital. It appears that wound infection is not a problem of cholecystectomy in Iowa.

CRITERION No. 8: SECOND OPERATIVE PROCEDURE IS NOT EXPECTED TO BE PERFORMED DURING ADMISSION FOR CHOLECYSTECTOMY

In our study, 27 second procedures occurred (1.5%) that were not planned originally. Of those 27 patients, 10 (42%) had surgery to correct a complication of the first surgery, a second operation rate of 0.5%. The 14 remaining (58%) were surgeries unrelated to the cholecystectomy. Three cases that underwent a second operative procedure were examined by the local medical care evaluation committee and were found to be unjustified procedures for that hospital stay.

CRITERION No. 9: READMISSION WITHIN 6 WEEKS OF DISCHARGE IS NOT EXPECTED FOR A PATIENT UNDERGOING CHOLECYSTECTOMY

There were 67 variations to this criterion, but only 2 deficiencies: (1) readmission for acute thrombophlebitis, and (2) a readmission with postoperative infection not responding to outpatient therapy. Here it appears the local committees were correct in analyzing these deficiencies and in no other cases was it evident that readmission was related to initial management of the surgical problem.

ADDITIONAL INFORMATION

Additional information was requested as a part of this study to gather data apart from the audit criteria. The total number of operative cholangiograms in this series of patients was 726 (39%). Many surgeons routinely perform operative cholangiography through a catheter inserted into the common bile duct during *all* cholecystectomy operations.² There are sever-

al reasons for operative cholangiography on a routine basis, even without clear indications for common duct exploration. The first reason is to establish the absence of choledocholithiasis when there are none of the usual indications for exploring the common bile duct. This will detect stones in 1 to 3% of cases. A second reason is to reveal occult stones when none are suspected, a finding that occurs in 4 to 5% of cases. Operative cholangiography has reduced the number of patients undergoing exploration of the common duct from 41 to 25%, and has strikingly increased the number of positive explorations from 28 to 62%.² About half the patients who have preoperative clinical indications for common duct exploration will have normal operative cholangiograms and can, therefore, be spared exploration of the common duct with its statistically higher morbidity and mortality rate.

The total number of patients receiving antibiotics prior to surgery was 259 (14%). Therapeutic levels of antibiotics in the biliary system are not achieved if there is obstruction of the common or cystic duct.² Consequently, antibiotics are not predictably effective in sterilizing an infected biliary tree or in stopping local inflammatory processes in acute cholecystitis. The major objective of antibiotic therapy is to achieve adequate blood levels of drugs to reduce the chance of sepsis. The low rate of preoperative antibiotic use in this study (14%) is commendable in view of the temptation that might exist to employ antibiotics reflexively for elevated white blood cell counts and fevers.

A rather dismal finding was that 489 patients (26%) received intermittent positive pressure breathing (IPPB) sometime during their hospitalization. This high rate of IPPB utilization might lead one to surmise that in some hospitals it is used routinely as a part of operative care. The records of individual hospitals confirm this suspicion, with 5 hospitals giving IPPB treatments to virtually every patient with cholecystectomy. These 5 smaller hospitals accounted for 16% of the total use of IPPB. Nine other hospitals were found to use IPPB in more than half of their patients with cholecystectomy. In light of recent thinking on IPPB,⁹ it is prudent to discontinue routinely ordered IPPB for any type of surgery.

Finally, we sought the number of wound dehiscences. Nine cases occurred (0.5%).

Wound dehiscence can be partially prevented by proper wound closure. Transverse incisions are associated with a significantly lower incidence of wound disruption than are vertical incisions.² Nonetheless, vertical incisions continued to be used where transverse incisions might suffice. The most common cause of incisional disruption is wound infection, and this should be borne in mind when closing a possibly contaminated wound. The use of IPPB might be a possible etiologic factor in producing wound dehiscence. When wound dehiscence occurs, the hospital staff is encouraged to examine the case for possible contributing factors that might permit a preventive approach in the future.

SUMMARY

Our assessment of cholecystectomy in Iowa reveals no tendency toward "unnecessary surgery." Morbidity and mortality rates are in line with those reported in the general surgical literature and, in fact, are better than most. Further improvement in the quality of care for cholecystectomy in Iowa might come with the shortening of preoperative hospital stays and a reduction in operating time. Not only would such changes yield cost benefits, but perhaps a reduction in the risk of morbidity and mortality as well. An alarmingly high use of IPPB was discovered with cholecystectomy; this area of overutilization needs continued attention of the peer review process.

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CHOLECYSTECTOMY: AN EVALUATION OF CARE IN IOWA

Continuing Medical Education Credit Quiz

This learning experience is intended for all health professionals performing or assisting in the performance of cholecystectomy. When the learner completes this reading, he/she will be able to: (a) be familiar with the prognosis of cholelithiasis and the success of its treatment; (b) call attention to the three principal causes of mortality following cholecystectomy; and (c) be familiar with expected complications of cholecystectomy.

One hour of continuing medical education credit (AMA Category I) is offered to those who read the article carefully and answer the questions. You are invited to answer the questions and submit them with the information requested. Simply (1) check the correct answers; (2) enter the information requested; (3) remove this page from the JOURNAL; (4) prepare a check for \$3 (to cover administrative costs) made payable to the University of Iowa; and (5) mail the quiz and check to the Iowa Foundation for Medical Care, Colony Park Suite 500, 3737 Woodland Avenue, West Des Moines, Iowa 50265. You will be provided a report on your quiz and a confirmation of the CME credit.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Iowa College of Medicine designates this continuing medical education activity as meeting the criteria for one credit hour in Category I for education materials for the Physician's Recognition Award of the American Medical Association provided it has been completed according to the instructions.

PLEASE ANSWER THE FOLLOWING QUESTIONS (choose the one best answer)

1. Which one of the following statements about the oral cholecystogram is true?
 - ☐ a. The false positive rate for oral cholecystograms is 10%
 - ☐ b. The cholecystogram is 95% accurate under optimum conditions
 - ☐ c. The false negative rate for oral cholecystograms is 5%
 - ☐ d. Even when acute symptoms are present the oral cholecystogram is 95% accurate
 2. Which one of the following is *not* an indication for prophylactic cholecystectomy for asymptomatic gallstones?
 - ☐ a. Patients who are over 60 years of age and live alone
 - ☐ b. Patients who are diabetic
 - ☐ c. Patients with a stone larger than 2 cm.
 - ☐ d. Patients with calcified gallbladders
 3. What is a reasonable estimate of the expected rate of wound infection following cholecystectomy?
 - ☐ a. 1%
 - ☐ b. 5%
 - ☐ c. 10%
 - ☐ d. 15%
-

-
4. What is the major variable affecting operative mortality for cholecystectomy?
- ☐ a. Cardiovascular disease
 - ☐ b. Diabetes
 - ☐ c. A stone larger than 2 cm.
 - ☐ d. Age of the patient
5. The 3 principal causes of mortality related to cholecystectomy in Iowa are:
- ☐ a. Myocardial infarct/ cardiac arrest, pneumonia, sepsis
 - ☐ b. Pneumonia, sepsis, postoperative aspiration
 - ☐ c. Myocardial infarct/ cardiac arrest, pulmonary embolus, congestive heart failure
 - ☐ d. Renal failure, cerebrovascular accident, sepsis
6. Wound dehiscence occurring after cholecystectomy can be partially prevented by all but one of the following. Select the one measure that was *not* listed as a preventive measure.
- ☐ a. Use of a transverse incision
 - ☐ b. Decreased use of routine IPPB postoperatively
 - ☐ c. Use of prophylactic antibiotics
 - ☐ d. Careful attention to contaminated wounds
7. This study of cholecystectomies in Iowa revealed an apparent overutilization in which one of the following areas?
- ☐ a. IPPB
 - ☐ b. Prophylactic antibiotics
 - ☐ c. Blood transfusions
 - ☐ d. Oral cholecystograms
8. What percentage of all patients with gallstones are asymptomatic?
- ☐ a. Less than 10%
 - ☐ b. 10 to 20%
 - ☐ c. 30 to 50%
 - ☐ d. Over 50%

PLEASE DO THE FOLLOWING IN ORDER TO RECEIVE CREDIT:

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QUESTIONS - ANSWERS

HEINZ S. JACOBI, M.D.
Waterloo, Iowa

COMMENTS ON CHOLECYSTECTOMY STUDY

The following observations are on the Iowa study of cholecystectomy which appears in this issue. They are the thoughts and opinions of Dr. Jacobi, who is in the private practice of general surgery in Waterloo. Dr. Jacobi serves currently as president of the Iowa Academy of Surgery.

Would you conclude that cholecystectomies are generally being performed in Iowa in appropriate numbers?

Comparison of Health Service data systems figures for the number of cholecystectomies in Iowa (4,430) and those in the United States (500,000 to 800,000), with the population figures of the state and the nation, would indicate less surgery being done in the state on the average than for the nation. The average age of our Iowa population is higher than the average age for the nation. The percentage of people over 65 undergoing cholecystectomy has increased from about 5% to about 30% over the last 30 years. Operative mortality of cholecystectomy increases with age from 0.3% in patients under 50 to 1.6% in patients between 50 and 64 and to 4.9% in patients over 65. Surgery for acute cholecystitis carries a seven-fold mortality over chronic cholecystitis. Surgery carried out after gallbladder stones have passed into the common duct and require its exploration increases the operative mortality ten-fold in any age bracket. It seems to me, therefore,

that while the cholecystectomies performed in Iowa are generally in appropriate numbers, it might be proper to take a slightly more aggressive approach to elective cholecystectomy before acute inflammation, age, and/or common duct stones increase the operative mortality and morbidity.

What comments do you have about reducing the number of preoperative hospital days and also the reported length of operating time? Do these factors have much impact on infection potential?

Prolonged preoperative hospitalization is indeed associated with infection potential both by acquisition of resistant hospital bacteria and as an indication of the presence of other problems requiring the preoperative hospitalization (diabetes, cardiovascular disease, etc.) lowering the patient's resistance to infection. The length of operating time theoretically, at least, increases the exposure to airborne bacteria. But on the other hand, short cuts such as mass ligatures, poor hemostasis, and rough tissue handling to reduce the operating time also increase the infection potential. Biliary tract surgery should not be considered a clean surgery like a hernia or a thyroid, nor outright dirty surgery such as a fistula or an abscess, but like urologic surgery — "potentially dirty."

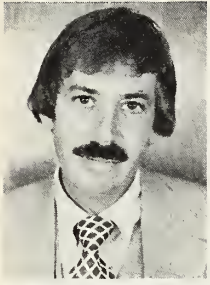
Are the laboratory and diagnostic findings, as reported, sufficient to justify the procedure?

The diagnostic findings as reported are probably sufficient to justify the procedure. The rapid increase in the use of sonography in cases of non-visualized oral cholecystography, as well as the time honored repeat oral cholecystogram for a non-visualization to prove a non-functioning gallbladder, are certainly increasing the accuracy of the preoperative diagnoses.

Do the wound complication findings seem acceptable?

The number of variations reported in the swelling erythema and significant wound drainage within 48 hours of the patient's discharge seems in the acceptable range keeping in mind, as mentioned before, that biliary tract surgery is a potentially dirty field.

(Please turn to page 13)



GETTING THE LOWE-DOWN

BERNIE LOWE, CLU, RHU

This column will be offered frequently to help JOURNAL readers better understand current financial developments which have implications for medical practice and for personal or family circumstances.

WHAT YOU CAN DO UNDER NEW IRA RULES!

THIS IS THE FIRST YEAR employees covered by qualified corporate and Keogh plans are eligible to establish their own individual IRA accounts. The obvious advantages are the opportunity to sock away between \$2,000 and \$4,000 (depending on certain factors) of *before-tax money* annually and watch it grow *without any current income taxation* whatsoever. The accumulation of retirement savings with an IRA is dramatically superior to a similar investment where after-tax investment dollars are subject to interest income taxation.

For example, a 40-year-old physician contributing \$2,000 annually in a 50% income tax bracket and earning 9% would have \$184,648 at age 65 versus only \$46,571 if he didn't have an IRA.

These questions and answers will help clarify the new rules and their possible application to your retirement planning:

Who may have an IRA?

Anyone working (part-time or full-time) that has "earned" income. This includes working children and spouses.

How much can I deposit annually on a tax-deductible basis?

Individuals — \$2,000; individuals with *non-working* spouses — \$2,250; individuals with *working* spouses — \$4,000 (2 IRA's). 100% of the earned income may be deducted; old tax law limited the contribution to the lesser of 15% or \$1,500.

Will the government call it discriminatory if only salaried and other high paid employees participate in the sponsored plan?

No. Participation is *voluntary* for all wage earners, regardless of personal income tax bracket.

Is there a financial advantage to the participant under the employer sponsored IRA plan?

Yes. Employees have an *immediate* reduction in their income taxes, as employers are not required to withhold federal income taxes on payroll deductions for deductible voluntary contributions to a plan if the employer can reasonably expect the employee to be able to deduct them.

Can you switch from one IRA to another within the tax year?

You can close an IRA and transfer the funds to a new one without tax or penalty once a year, as long as the transition during which you hold the assets isn't longer than 60 days.

Are there prohibitive investments for IRA accounts?

Investments in stamps, art, gold, jewelry and other collectibles are prohibited for future IRA accounts.

What happens to the IRA account when the employee dies?

Federal estate taxes are avoided if the money is paid out on a regular basis to beneficiaries over a period lasting at least 36 months. Under new tax law, a lump sum IRA account could be left to one's spouse in the form of an unlimited marital deduction bequest.

Can I roll over previous voluntary employee contributions made to my employer's plan into a new IRA account?

Yes, a distribution of accumulated deductible employee contributions may be rolled over

tax free to an IRA. The distribution may be partial or total.

The remaining issues are probably the most important in your decision to establish an IRA or contribute to the present retirement plan. If your employer elects to amend its plan to allow contributions, there will be additional time and expense involved to pay for this flexibility and record-keeping, increased costs of plan administration, additional IRS reporting and the strong possibility of more fiduciary responsibility. Establishing a payroll deduction plan will simplify procedures and communication to the employees as well as lower the cost of administration. The other advantages of a payroll deduction IRA plan include: confidentiality of the account, portability, range of in-

vestment alternatives available, additional guarantees available, and the immediate deduction of no federal income tax withheld.

Lastly, the decision of where *not* to invest your IRA is as pertinent as where to put it. *Business Week* (9/14/81) lists investments to avoid — and why. Among the investments that cannot be used are municipal bonds, all-savers certificates, collectibles and margined stock accounts. The Prouty Company expects interest in *no-load* annuities, mutual funds, variable annuities wrapped around money-market funds, and real estate limited partnerships. Whatever your choice, the *flexibility of re-investing* in our volatile, changing marketplace will probably be paramount in your selection.

QUESTIONS/ANSWERS

(Continued from page 11)

Does the length of stay for this procedure seem realistic for good patient care and for corresponding economy?

The 29% of the sample showing a hospital stay of more than 10 days after cholecystectomy does seem high. It may be partly due to the above average age of our population and partly due to the generally conservative attitude of Iowa surgeons which in turn may result in more patients being operated upon as emergencies with acute cholecystitis, rather than elective cases for chronic cholecystitis or even "silent" cholecystolithiasis. I feel that shortening hospital stays should be striven for on the basis of improved patient care rather than to decrease the cost of medical care without regard to quality.

What general conclusions would you have from reading this Foundation study based on information from 60 Iowa hospitals?

This study on the evaluation of care in Iowa for cholecystectomies is based on voluntary participation of less than half of the state's hospitals and includes less than 45% of the total number of cholecystectomies done in that

year. This does leave one wondering whether hospitals not participating were less proud of their results than those who did participate. Therefore, conclusions from this study should not be extrapolated for the other 72 hospitals and the other 2,577 cholecystectomies carried out in the state during the same year. Furthermore, a breakdown of cases as to acute versus chronic cholecystitis, with or without common duct exploration, the number of cholecystostomies, the number of choledochostomies, and the number of patients having cholangitis, and those having concomitant pancreatitis, might be instructive. Seven hundred and twenty-six cholangiograms for 1,853 cholecystectomies seems to me to be on the low side depending, of course, on how many of these were operative cholangiograms to rule out the need for common duct exploration versus T-tube cholangiograms carried out after exploration of the ducts. This study also fails to indicate how many of the cholecystectomies were incidental to other operations, such as gastric and duodenal ulcers, carcinomas of the colon, and operations for morbid obesity (the latter certainly carries an increased risk of cholecystolithiasis). In conclusion I would suggest that it might have been appropriate for at least one general surgeon to have participated with the group of excellent family physicians, internists, and urologists who carried out this worthwhile project.



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A View of Medical Care In China

LYDIA CAROS, D.O.

Rochester, Minnesota

IN THE LATE SPRING of 1981 I participated in a 3-week pediatric clinical study tour in the People's Republic of China. This was a program of the University of New Mexico School of Medicine in cooperation with the Beijing Medical College and the Chinese Medical Association. The American pediatricians came from all over the country; many were medical school faculty. I was the only resident; just completing my first year at Raymond Blank Memorial Children's Hospital in Des Moines, Iowa.

In China we visited hospitals, clinics, medical schools, rural communes and urban residential areas. We met various health workers and their families, including barefoot doctors, traditional therapists and medical school professors. We shared our concepts of child health and we began to understand the impact of changes in Chinese society on the health and welfare of children and families. We also had a chance to examine in more detail the structure and operation of health care in the PRC.

The trip covered 5 cities: Beijing, Shanghai, Hangzhou, Gangzhou and Hong Kong. In each city there was at least one full day in

Dr. Caros was a pediatric resident at Raymond Blank Memorial Children's Hospital in Des Moines, Iowa, when this travel experience occurred. She is now pursuing her residency at The Mayo Clinic.

We can learn from each other. Our scientific technology for their sense of responsibility to the whole of society. So says the author, a pediatric resident, after a 1981 visit to China.

conferences. We met Chinese pediatricians in an informal (but very proper) setting with tea poured and repoured as we presented topics and asked each other questions. We compared practices, research and problems endemic to our separate countries and cultures.

Our medical director, Dr. Robert Greenburg, was the perfect ambassador. He opened the first conference (in Beijing) with a lecture on "The Unmet Health Care Needs of Children in the United States." His comments were based on a select panel study he participated in under Congressional auspices.¹ The report focused on the effect of socioeconomic and racial differences on health indices. He noted that 16% of all U.S. children live in poverty, and that the health status of these children is demonstrably poorer. Children of low-income families are less likely to have a regular source of medical care, and are more likely to be hospitalized. Racial factors, single parent families and unmarried mothers all clearly showed a significant difference in the health of children living in those categories. Dr. Greenburg characterized the United States as having the ability to care for children with *difficult* disease in extraordinary fashion — but *ordinary* care is inadequate for the whole.

By first discussing our own problems, open-

THE IOWA MEDICAL FOUNDATION HAS DESIGNATED THIS ARTICLE AS THE HENRY ALBERT SCIENTIFIC PRESENTATION FOR THE MONTH OF JANUARY 1982

ly, Greenburg facilitated a comparative consideration of similar problems in China. Everyone was smiling, congenial. The Americans were expectant and eager. We were all a bit deflated initially to find the Chinese could not compare our situation to theirs at all. Like adding oranges and apples. The chief of pediatrics at Beijing Medical College responded quietly by saying, "the Chinese people receive equal quality of care for all, no matter where they live." The major problem, she said, "is lack of technology." And we learned, over and over, that for the most part, she was right.

UNIQUELY SUITED SYSTEM

Despite vast numbers and extremely limited financial resources, the present Chinese health care organization appears uniquely suited to the needs of a large rural developing country (80% of Chinese live in the countryside). And more surprising, it is being achieved primarily by the participation of the people themselves, by the development of new health-worker roles, and through the overall political and economic decisions.

Our medical meetings were generally informative, but frustrating. The lectures had to be translated and the pause between questions and answers was sometimes difficult. We asked many statistical questions and received few statistical answers. Research has not yet been extensive enough in China to produce much statistical data. And with closure of many medical schools during the Cultural Revolution (1966-71) the statistical process has slowed even more.

But aside from these problems we were able to compare standard clinical practices. We learned they treat febrile seizures as we do (and it's a controversy there, too); that they do not use antibiotics for otitis media; that asthma is uncommon; and that they see many children with hyperactivity (and use a lot of Ritalin). The Chinese patiently tried to answer our barrage of questions and were gracious everywhere we went.

HOSPITAL ROUNDS

We made hospital rounds in the major children's wards in each city. Pediatric beds ranged from 70 (in Gangzhou) to 320 (in Hangzhou). The hospitals were reminiscent of old movies and novels about medicine in the 30's

and 40's. There were group wards with white painted iron beds; thick rubber IV tubing (resterilized) with no disposable products of any kind. All the staff wore white surgical caps and long white lab coats. The patients were like those in any children's ward. There were children with pneumonia, ALL, nephrotic syndrome, and various surgical cases (ortho, GI, cardiac and neuro).

The medical libraries associated with these hospitals were completely filled with medical students and were absolutely quiet. All pediatric journals I have ever seen in the U.S. were represented, along with the pediatric texts of Nelson and Rudolph and, of course, Chinese medical texts. Journals from all over the world are translated by the Chinese Medical Association.

It is notable that we saw very little in neonatal intensive care facilities. The birth rate of low weight infants has decreased significantly in China. They could not explain why, but they did mention the economy could not afford NICU facilities similar to the U.S. They indicated trying to *prevent* low birth weight infants from being born — with improved prenatal care and family planning. The slogan is "late, long, and few." In 1951, the law forbade marriage before 18 years for females and 20 for males. Most people in the cities wait until 24-25 years while those in the country often marry around 23 years. Couples are encouraged to have only one child. The government will give the parents a subsidy for that child until he/she is 14 years old. There are bonuses at work for the parents, and there are good day care facilities. If a second child is born, there is no subsidy.

BIRTH CONTROL

Birth control products and procedures of all kinds are free and available to all married persons. Young people "seldom have sexual contact." There are strict laws against illegitimacy; both parents can be imprisoned. Sex is singularly non-commercialized and promiscuity is frowned upon. It was interesting to notice the lack of seduction in Chinese advertising. (How can they expect to sell merchandise if they don't sprawl a scantily dressed woman on it?)

The health care system in China has, for almost 30 years, been based on Mao's directive to "put stress on the rural areas."² He emphasized "putting prevention first" and integrat-

ing health work with mass movements. The result is Chinese per capita income that is in the world's bottom third even though the health status, birth rate and mortality statistics resemble those of the wealthier and more highly industrialized U.S. Food supply has hardly increased in two decades but stringent rationing and planned distribution have allowed China to eliminate hunger and ensure 2000 cal/d on the world's third largest land mass.³

COMMUNICABLE DISEASE

It is well known that the Chinese have accomplished enormous improvements in communicable disease control by "mass mobilization," public education and auxiliary personnel training. Millions of people have been mobilized to fight off such things as flies, mosquitoes, bedbugs and rats to eradicate schistosomiasis. They are masterful at organizing education projects for better sanitation, pollution control and personal hygiene. Their 1950 campaign to eradicate VD was regarded as successful by 1966. In 1975 visitors were told the medical school curriculum no longer taught about VD because there were no cases to show.⁴

MANPOWER AND FACILITIES

In 1950 there were 3,000 hospitals and 9,000 physicians. In 1977 there were 64,000 hospitals and 250,000 physicians. For every 100,000 population there are 35 fully trained doctors, 45 intermediate level doctors and 200 barefoot doctors.⁵

The term "barefoot doctor" apparently originated in 1958 in south China where peasants are barefoot during the planting of the rice paddies.⁶ Young farmers are chosen by their fellow commune members for 3 to 6 months of training in general medical knowledge and techniques. They are taught to diagnose and treat 20-30 kinds of common disease. Refresher courses are available at various intervals, but the frequency of these seemed to be irregular. The barefoot doctor's primary emphasis is prevention and it is his/her responsibility to teach sanitation, eliminate pests, report infectious disease, give vaccines, deliver babies, give first aid and encourage family planning. Serious illnesses are transported by car (no helicopter) to larger medical centers in the area.

The cities have numerous neighborhood health stations as well as medical facilities in all of the factories. There is comprehensive and

specialized care in hospitals and institutes. Hospitals are owned and operated independently by agricultural cooperative provincial and local governments. All government office workers, factory workers and students have free care. Most agricultural laborers pay an annual membership fee for health care, and an equal or larger amount is paid from a collective accumulation fund of the production teams. The peasants get free medical care in the cooperative health stations (although several communes charge visit fees to reduce over utilization).

Recently there has been a new focus on increasing the growth of the economy 50% faster than in the last 25 years. There are signs of a shift from total concern for primary care to a greater concern for the acquisition of the most advanced skills of modern medicine. There are worries that this will divert attention from needs in rural areas.⁷ Developments in the next decade will involve a struggle between these priority differences. Hopefully some balance between the two can be achieved.

SUMMARY

My time in China was brief, but it may turn out to be one of the more important segments of my medical training and development. It was very helpful to compare our system of health care with theirs and see our various strengths and weaknesses. It was humbling to realize that China has provided for the basic needs of its one billion people while the U.S., with all our wealth and power, has been unable to provide as broadly for our own people. The U.S. and China have much to offer one another. I hope that in return for our technology and scientific advances the Chinese people can help us to (1) focus more on working for the common good in our country, and (2) to seek a greater sense of responsibility for the whole of society. Organizing and working together efficiently for the common purpose of health for *all* citizens is a goal to which every country can aspire.

Special thanks to the Iowa Medical Foundation for its generous support of this special study, and to the pediatric faculty, staff and fellow residents at Blank Memorial Children's Hospital for making the trip possible.

REFERENCES

The references noted in this article are available on request either from the author or the JOURNAL OF THE IOWA MEDICAL SOCIETY.

THINGS YOU SHOULD KNOW

LAWMAKERS RETURN

Money woes will bedevil Iowa legislators as they return for the election year session of the General Assembly beginning January 11. Fiscal curtailments could hit hard on important funding for Medicaid, medical education and other health activity.

IMS LEGISLATIVE COMMITTEE MEETS

Actions of the 1981 House of Delegates dealing with legislation were analyzed December 2 by the IMS Legislative Committee. 1982 Society efforts will target on keeping practice acts of limited health care practitioners intact; effort will also be made to preclude mandating specific insurance benefits by law. Support will go to maintain Iowa Medicaid at present curtailed provider benefit levels.

BME APPOINTEE

Richard L. Carruthers, D.O., of Walcott (near Davenport), has been named by Governor Ray to the State Board of Medical Examiners. This appointment fills an extended vacancy and brings the BME to its complement of nine.

PROGRAM FOR DENTISTS

A program of help for troubled Iowa dentists (similar to the IMS APTP) is functioning under the name Concerned Iowa Dentists (CID). This is a voluntary and confidential program. It is called to the attention of Iowa physicians should a future referral be desired.

IMS/AETNA LIABILITY

Annual renewal for the nearly 1,300 IMS/Aetna professional liability insureds occurs 2/1/82. As reported earlier, rates go up 20% this year; bear in mind, however, the overall five-year rate increase is only 23% -- plus in that time over \$1 million has been paid in dividends.

1982 SCIENTIFIC SESSION

For those planning ahead, keep in mind the 1982 IMS Scientific Session is April 6, 7 and 8 in Iowa City. New University of Iowa President James Freedman has accepted an invitation to speak at opening ceremonies.

NEWBORN SCREENING

The Iowa Newborn Screening Program ran out of federal dollars January 1. This voluntary project has been operative for about a year. A new financing plan has been devised by INSP officials. It is based on a \$12 cost to be passed by hospitals to families or third-party payers. A split of the charges is planned to cover analyses of the four diseases plus program/consultation costs. An explanation of the financing plan is available from the State Birth Defects Institute or IMS Headquarters.

PRIVATE REVIEW

At the close of the year, the Iowa Foundation for Medical Care reports having contracts to do private review for approximately 20 organizations. Recent additions are the Travelers and John Hancock insurance companies and through them Rath, Morrell and Bandag.

STIMULATING OUTPATIENT CARE

Blue Shield has initiated recent experimental coverage programs with Pella Rolscreen and Pioneer HMO which include deductibles and co-insurance, and which additionally provide payment for surgical supplies used in a physician's office.

HMO APPROVAL

December approval was given by the Iowa Health Facilities Council to the Cedar Valley Health Plan, an HMO to serve Waterloo-area Deere employees. An Individual Practice Association (IPA) will be associated with the HMO. A monthly fee of \$48.66 per person has been reported for the new HMO.



COMMENTING EDITORIALLY

MARION E. ALBERTS, M.D.
SCIENTIFIC EDITOR

HAVE A NICE DAY & A HAPPY NEW YEAR

*Ring out the old, ring in the new,
Ring happy bells, across the snow:
The year is going, let him go;
Ring out the false, ring in the true.
—TENNYSON, "In Memoriam"*

MANY HAVE WRITTEN about the advent of a new year. The sages look back upon the years past, and speculate upon the year ahead. Resolutions are proposed. Hopes and desires are expressed. The new year enters as innocent as freshly fallen snow, but like the snow it soon becomes a victim to the tarnish of ensuing

days. Yet we have visions of the good to come and attempt to be optimistic of the future. If we do not retain hope for the days ahead, our lives become empty and of little productivity.

Frequently we hear the cry that "these are troubled times," yet just as often we rise above adversity and go forth victorious. We now hear of unemployment, rising prices, a faltering economy and lack of public funds to continue many programs backed by governmental agencies. Certainly, we have realities to face; our patients may be troubled and will need our help. There will be increasing numbers of people who may not have the funds for all the things to which they have become accustomed. Full medical coverage heretofore provided by third party carriers may be unavailable to some because of unemployment, and in many instances governmental programs will diminish in their support. Yet we must go on providing for our patients as we did before Medicare, Medicaid and Blue Shield.

This discussion is not meant to be a morbid tirade on the sad state of our Union. We still have the greatest society of all the world. The gloom set forth by the news media needs to be put in perspective. We are on the top — not we professional persons, but all citizens of the United States. Our future is brighter than the peoples of most other countries. We do have a right, and a responsibility, to be optimistic about the future. We can accept some failures with our successes. Over the long pull we will be the better for some of the adversities we experience. We end with those favorite greetings "Have a nice day!," "Have a very Happy New Year!," "Good health to you and your family." — M.E.A.

THE RAMBUNCTIOUS CAT

F. R. Richmond, M.D., Fort Madison, Iowa has reported an interesting and most unusual case where an invalid person was bitten by a cat afflicted with rabies.

The 66-year old patient had been bedfast with paralysis agitans for three months. On March 26, 1981, the man's grandchildren accidentally let a stray cat in the house. The cat

leaped on the patient's bed and severely bit his nose, almost severing it. Dr. Richmond sutured the laceration.

Fortunately, the cat was captured, and subsequent studies confirmed rabies. The patient was treated with five injections of Human Diploid Cell. The nose healed well, and the patient had no ill effects from the rabies vaccine.

Dr. Richmond is 89 years old and has practiced medicine for 60 years. We appreciate his sharing this clinical vignette with us. — M.E.A.

DIRTY HANDS

A RATHER strong indictment is made against physicians in a recent issue of the *New England Journal of Medicine*.^{*} Reported on are the hand washing techniques of hospital personnel in two medical intensive-care units. The compliance with hand washing recommendations was found to be poor in this unbiased assessment. The basic principles of infection control in these medical intensive-care units were frequently ignored, particularly by physicians. Hospital personnel washed their hands

^{*} Albert, R. K., and Condie, F.: *Hand washing patterns in medical intensive-care units*. N. Engl. J. Med., 304:1465-1466, 1981.

after contact with patients less than half the time. Physicians were among the worst offenders.

Our habits do not go unnoticed. For example, in my office practice I have made it a habit to wash my hands with soap and water before examining each patient. Sometimes I am reminded by a small child I have not washed my hands, when in fact I have in the laboratory just before entering the examination room. If a small child can notice such a patient courtesy, is it any wonder we physicians become subject to criticism by those who fully realize the implications of nosocomial infections. More education is needed among all health care personnel to realize their role in preventing infection.

By the way, when was the last time you washed your stethoscope? — M.E.A.

A Point of View

BIRTH OF A SMALL TOWN EMS

Nora Springs is a small town of 1,600. We have relied on a privately-owned ambulance service to take our critical cases and other emergencies the 12 miles to the nearest hospital. The ambulance service is headquartered in the neighboring town so at times it seemed we had to wait hours to transport a patient.

Our town has an excellent volunteer fire department. The thought follows naturally if these men are dedicated to helping, why wouldn't they be willing to form an ambulance corps with the same dedication?

Where would the funds come from? How could we maintain it? Could we cover in 24 hour shifts? How many groups could we form? We started to find the answers to these questions.

A variation on Murphy's Law began to emerge: *Don't believe in miracles, rely on them!* We became aware they were going to sell the county ambulance or do something with it. I decided to pursue the "do something with it" comment.

A contact with the head of the county ambulance service produced an agreement that we (the community of Nora Springs) could have the ambulance if we paid the insurance, etc. We had an ambulance!

My next step was personnel. We had to sell the volunteer firemen and recruit new personnel. The younger ones were interested. They brought their friends. We now had the ingredients — equipment and personnel.

Training came next. We, with donations and some paying their own way, sent 22 persons for EMT certification. I took the advance cardiac life support course and became the coordinator. We were soon operational.

Our first run involved a 54-year-old diabetic who arrested. I was most gratified when I saw our trained people bringing this person around and being able to take him into the coronary care unit.

We think we have formed a good ambulance team run by qualified EMT's. We have an active community education campaign to cover emergency situations. We have taught our citizens how to gain quick access. We have placed emphasis on farm accidents.

We have made people realize the importance of a community emergency service. It has made quite a difference. — S. GONZALEZ, M.D., Nora Springs, Iowa.



OUR MAN ON EDUCATION

RICHARD M. CAPLAN, M.D.

TO PRACTICE HUMILITY

THERE'S NOTHING quite like sitting beside a small lake, with abundant trees in view, blue sky and white clouds above, sun beating warmly on your shoulders. But there must be quiet, stillness. The noise of even a single engine is as ruinous as something unpleasant in the proverbial punch bowl.

Many thoughts float through one's mind, or maybe none at all for awhile. Even that sense of mental vacancy contributes to the mood. One of the feelings easy to develop in such a setting, and too rarely elsewhere, is insignificance. At such a time the capacity for awe grows. The reeds in the water, the scurrying ant, the small swishing splash of a surfacing swimmer, the fragment of white clam shell beside the pellet of red sandstone. . . .

Extolled the poet-artist William Blake:

*To see a World in a grain of Sand
And Heaven in a Wild Flower,
Hold Infinity in the palm of your hand
And Eternity in an hour.*

I suspect physicians too seldom feel insignificant. Entitled to it we are, but the circumstances of our work and life militate against it. Patients, employees, students, family — they do what we say, usually. At least, so frequently do we issue instructions. And if such a life of affairs is busy, and of course it is, then so very often do we belch forth decrees. Such activities

represent the continual practice of authority, assertiveness, power. Humility has trouble flourishing in such a climate. In some lives it can't even start to grow.

But what's the advantage of humility, anyway? After all, if one spends one's entire clinical and personal life in forward high gear, with never a neutral or reverse, why isn't that as good as or better than a life punctuated by occasional pauses? Perhaps there are many reasons why — among others, consider contrast, reinvigoration, or just getting acquainted with oneself. Perhaps a reason why some persons don't like to be alone is they are so dull and uninteresting they fatigue of their own emptiness. To reflect, to react with sensitivity, to ponder, to learn, to feel new experiences, to practice humility — these offer what we need to become more interesting. To read the words of great writers and thinkers (or re-read them) or to live vicariously awhile in a fantasyland (Walden Pond, or Through The Looking-Glass, or whatever) makes us richer in spirit, more alert and interesting companions to ourselves as well as to others.

CAN A PERSON who is aggressive, driving, competitive, achieving, domineering, possibly manifest the taking of time and the caring that is absolutely necessary if one would encounter those experiences that might yield the perceptions of quiet reflection, self-discovery and communion with a sense of something beyond the range of work and pressure that bounds the existence of too many physicians? In periods of solitude and stillness, ideas appear — yes, even diagnoses. The brain seems to work as a storehouse or factory for serendipity. With new ideas, fresh insights, experience broadened both directly and vicariously, we become more interesting to ourselves and others and, it is my firm assertion, more effective in both the technical and human-caring aspects of our workaday responsibilities.

The skill — exercising power — and its handmaiden, arrogance, require practice for their full flowering. Medical work provides unusually rich opportunities for such practice. The antidote, awareness of personal inadequacy, insignificance and mortality, also requires practice. The still summer lake, at once beauty and death's prelude, is a superb practice-field for that antidote.

Dr. Caplan is Associate Dean for Continuing Medical Education at The University of Iowa College of Medicine.

DRUG THERAPY REVIEW



UNIVERSITY OF IOWA HOSPITALS AND CLINICS

REYNOLD SPECTOR, M.D., Editor

IMMUNOPROPHYLAXIS OF HEPATITIS B

EDITOR'S NOTE — *Substantial progress has been made in the understanding and prevention of viral hepatitis. Dr. Lutwick outlines his approach to Hepatitis B viral infections below. In a future edition of the JOURNAL, Hepatitis A viral infections will be considered.* — Reynold Spector, M.D., Editor

AN ASSOCIATION of a long incubation type liver disease with the administration of blood or blood products, shared needles, and viral vaccines produced using human sera or lymph was made by a number of observers during the first half of this century. This illness, occurring about 60 to 180 days after exposure, became known as homologous serum jaundice after a description of an outbreak of icterus following the use of human convalescent sera to protect against measles infection in 1943. The term, shortened to serum hepatitis,

This information for Iowa physicians is furnished and sponsored by the University of Iowa Hospitals and Clinics.

was changed in the 1970s to hepatitis B, as it is known today.

Type B hepatitis is an infection of the liver which is found worldwide and can be spread from person to person as described above. It may also transmit with close (intimate) personal contact. In addition to causing acute hepatitis either icteric or anicteric, hepatitis B virus (HBV) is relatively unique among human viruses in that it may cause a chronic infection in the liver. This form of hepatitis B may be benign and self-limited (chronic persistent hepatitis) or destructive and progressive (chronic active hepatitis). Chronic active hepatitis B may progress, usually over a period of decades, to postnecrotic cirrhosis and is associated with primary hepatocellular carcinoma. Thus, the morbidity and mortality associated with HBV is not only the .5% incidence of fulminant hepatitis associated with acute hepatitis B but also the 10% incidence of chronic hepatitis recognized after overt hepatitis B. Because of a number of different factors, several population groups have a higher incidence of past or present evidence of hepatitis B. These include hemophiliacs, oral surgeons, male homosexuals, parenteral drug addicts, and individuals from Southeast Asia and parts of Africa. In addition to those individuals with biochemical evidence of liver disease (elevated serum aminotransferases) associated with hepatitis B, a large reservoir of HBV exists in individuals known as healthy chronic carriers. Their blood reveals evidence of ongoing virus replication (see below), but both initially and on followup evaluation shows no evidence of hepatic inflammation or clinical evidence of liver disease. Most of these healthy carriers (it is estimated that as many as 200 million of the world's population are carriers of one sort of HBV) have no history of overt hepatitis, and presumably have had subclinical hepatitis previously. One-tenth to two-tenths percent of Americans are thought to be carriers, with many of them discovered only fortuitously on blood donation. Thus, the health care worker by virtue of his or her close contact with high-risk groups is constantly in danger, through individual needle stick or otherwise, of exposure to HBV in patients who may or may not be known to be infected.

The diagnosis of hepatitis B infection is based on the detection of excess surface coat protein circulating in a noninfectious form in

the blood.¹ This feature of HBV is unique among human viruses. This protein, known as hepatitis B surface antigen (HB_s Ag), was originally discovered as the Australia antigen by Dr. Baruch Blumberg. Blumberg's discovery culminated in a Nobel prize in 1976. HB_s Ag is present during the incubation period of acute hepatitis B and in self-limited acute disease. However, HB_s Ag remains present in chronic infections. It remains the mainstay of diagnosis. In addition, rising titers of antibody to hepatitis B core antigen (anti-HB_c) and antibody to hepatitis B surface antigen (anti-HB_s) can be useful diagnostically. Anti-HB_c begins to rise at the onset of hepatitis while anti-HB_s only becomes detectable after HB_s Ag is cleared.

Prophylaxis against hepatitis B can be divided into two major areas — passive (administration of preformed antibody) and active (immunization with an antigen to stimulate the production of antibody). The aim of both avenues is to produce in the host the protective antibody, anti-HB_s. Classically, it had been taught that standard human immune serum globulin (ISG) did not protect against HBV as it did against the hepatitis A virus. These observations were made during a time when ISG did not contain significant amounts of anti-HB_s. ISG produced before the early 1970s was made from pooled plasma, before routine HB_s Ag testing of donated blood was available. Usually, any anti-HB_s in the pool was being complexed with HB_s Ag and purified away from the gamma globulin fraction. ISG made since 1973 has had easily detectable levels of anti-HB_s.²

A number of studies have been performed to assess the utility of high titer hepatitis B immune globulin (HBG) as prophylaxis for HBV. The studies have assessed HBG in the setting of needle stick exposures from an HB_s Ag positive individual, neonatal exposures, and sexual partner exposures. Two major studies have examined the efficacy of globulin in the accidental needle stick situation, a common intramural hospital occurrence. Grady and Lee's multicenter study³ published in 1975 seemed to show that HBG was no more effective in preventing hepatitis B than a lower titer globulin, but a delay in the incubation period was noted. The second study, a VA cooperative effort published in the same year, compared HBG against ISG produced in 1944 (hav-

TABLE I
IMMUNOGLOBIN PROPHYLAXIS FOR HEPATITIS B

- I. Household Contacts
 1. Sexual contacts of acute cases: ISG¹ or HBG² 0.06 ml/kg
 2. Other contacts of acute cases: no therapy recommended
 3. All contacts of chronic cases: no therapy recommended³
- II. Parenteral Contacts (needle stick, bite, blood on open cut on mucosa)
 1. All potential contacts in high-risk situations should be routinely tested for HB_s Ag/anti-HB_s.³
 2. Contact is seronegative at exposure: HBG² 0.06 ml/kg as soon as possible and 30 days. Followup for efficacy.
 3. Contact is of unknown serology at time of exposure: ISG¹ 0.06 ml/kg as soon as possible after serologies drawn. If contact seronegative, HBG should be used as in II-2.
- III. Neonatal Exposure
 1. All pregnant females in high-risk groups should be screened for HB_s Ag, and if positive for HB_s Ag.⁴
 2. Mother with HBV during gestation with recovery and anti-HB_s positive at parturition: no therapy.
 3. Mother with acute hepatitis B in third trimester or HB_s Ag + carrier: HBG 0.13 ml/kg or ISG¹ 0.5 ml/kg for the newborn infant as soon postpartum as possible and at three and six months with followup for efficacy.
- IV. Foodhandler Hepatitis
 1. No prophylaxis necessary for HBV

Notes

1. If using ISG for HBV contact, the lot of ISG should be known to contain reasonable amounts of anti-HB_s.
2. If Public Health Service guidelines change, ISG (containing anti-HB_s) may be a recommended alternative to HBG in some or all settings.
3. High-risk individuals should be considered for HBV vaccine when available.
4. HB_s Ag seems to correlate with increased infectivity.

ing no detectable anti-HB_s titer). This study^{4, 5} concluded that less overt hepatitis B disease occurred in the HBG group (compared to placebo), but considering subclinical disease (passive-active protection) the groups were equivalent. Interestingly, further serological testing⁵ revealed that the anti-HB_s negative ISG contained occult amounts of HB_s Ag and effectively immunized 36% of the recipients. Similar data is available for neonatal and sexual partner situations in which the clear superiority of HBG over other products is not available. It appears, therefore, that there is no firm evidence that HBG should be the preferred immunoglobulin product for use against HBV.

DESPITE THIS, the Public Health Service Advisory Committee on Immunization Practices⁶ recommends HBG for needle stick exposures. Currently, these guidelines are being revised. A major factor in the concern about the utility of HBG is its cost as the 2-dose regimen: about \$320 for the average adult as compared to about \$30 for standard ISG. A

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DRUG THERAPY REVIEW

(Continued from page 25)

rational approach to immunoglobulin prophylaxis is shown in Table I. The immunoglobulin products are not 100% efficacious, in addition, as 2 to 5% of those treated will still develop biochemical hepatitis.^{4, 5} Furthermore, no difference in toxicity occurs between HBG and its lower titered cousins as related to local pain at the injection site. A theoretical complication of antigen-antibody complex disease, if the HBG is inadvertently administered to an already HB_s Ag positive individual, appears not to be a reality. Finally, many of the cases of hepatitis B in health care deliverers occur without known previous overt exposure so that globulin prophylaxis would not have been used. Therefore, not only is immunoglobulin prophylaxis flawed by a lack of clarity relating to which product should be used, postexposure prophylaxis as it is currently practiced will not be useful for those individuals with an unrecognized exposure.

Because of these shortcomings in passive protection, increasing interest has been focused toward a vaccine to prevent hepatitis B. Soon to be released for use in the United States, the current vaccine (produced by Merck Laboratories) will be unique among available vaccines. This biologic is produced from human chronic HB_s Ag carrier plasma. The plasma is treated with a series of precipitations and centrifugations to produce highly purified HB_s Ag, which is then treated with formalin to inactivate any theoretically present infectious virus and is prepared for use as an alum precipitate. All detectable protein in the product is accounted for by HB_s Ag. Although at this writing the official indications for use of the vaccine have not yet been formalized, the product will probably be recommended for a number of high-risk groups. Among these groups will most likely be health care deliverers such as oral surgeons, dentists, physicians, dental hygienists, laboratory technicians working directly with blood, phlebotomists, and workers at custodial care facilities for the retarded such as the Woodward School. Other groups with high risk of hepatitis B include hemodialysis patients and staff, patients to receive multiple blood products over time (i.e., hemophiliacs) or at one time electively (open

heart surgery), parenteral drug addicts, and male homosexuals. The vaccine will be recommended to prevent infections with all antigenic subtypes of HBV in high-risk groups and is not indicated for the prevention of any non-B hepatitis. The vaccine is not expected to be recommended for individuals under 6 months of age at this time.

A controlled clinical trial of this vaccine has been performed using a population of male homosexuals in New York who have a very high risk of HBV acquisition. This study⁷ revealed a 92% reduction of incidence of hepatitis B in the vaccine group over the placebo-vaccinated group. The vaccine was given as 3 inoculations at zero, one, and 6 months, and 96% of the vaccinated, previously seronegative individuals developed anti-HB_s using this regimen. Further followup⁸ of these individuals has revealed somewhat waning antibody levels over the 20-month period after the third inoculation. It is unclear when, or if, further boosters will be necessary. Vaccine trials have been done in hemodialysis units showing reasonable efficacy in this situation.⁹ In addition to a high degree of efficacy, the Szmunn report⁷ suggests that the vaccine is very well tolerated. A large part of the side effects were related to local soreness at the injection site; however, rash, nausea, joint pain, fatigue, and low-grade fever were noted. The incidence of all side effects (24%) was reasonably low and well tolerated and not significantly different from the placebo group. In addition to lack of data on duration of immunity, several drawbacks are present in this current vaccine. As already noted, it is produced from human plasma so that extreme precautions must be taken to insure that the vaccine is free from other potentially dangerous viral or nucleic acid contaminants. Each vaccine lot goes through an extensive *in vivo* safety testing protocol, including chimpanzee inoculations prior to availability. In addition, the complex technology used in vaccine production as well as the safety testing will make this vaccine relatively expensive. The 3-dose regimen is estimated to cost \$75 to \$90.

IT IS EXPECTED that this vaccine is probably an interim one since a number of modified vaccines are being developed. Although recombinant DNA bacterial clones have been

manufactured that can synthesize HB_s Ag, it is likely that the final vaccine will be a product of even more basic DNA technology. Now that the primary nucleic acid sequence coding for HB_s Ag is known, investigators¹⁰ use computer technology to predict the hydrophilic areas on HB_s Ag which are most likely to be external in the protein's tertiary structure. Indeed, small (20-40 amino acid) residues synthesized in the laboratory appear to be antigenic for the production of anti-HB_s and may eventually be used as a vaccine.

Hepatitis B continues to be a significant problem in hospitals. The use of passive immunization with gamma globulin is a first step in the protection against disease. Since many exposures in high-risk individuals are ignored or unrecognized, this postexposure prophylaxis is not ideal. The licensure of a unique new vaccine that produces immunity to hepatitis B should be a significant step in the eradication of this virus as a health hazard to hospitalized individuals and those who care for them. The vaccine, when it becomes available, should be used extensively to protect such high-risk groups. — Larry I. Lutwick, M.D., Assistant Professor of Medicine

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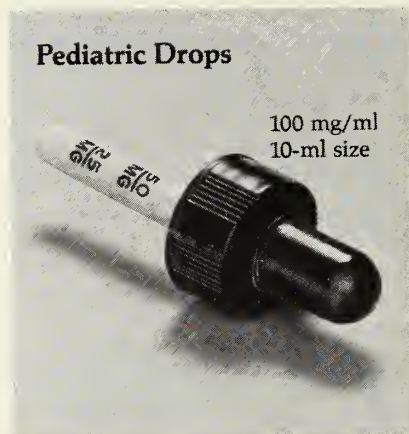
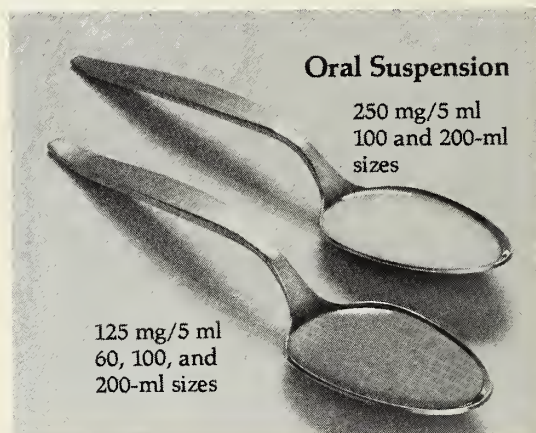
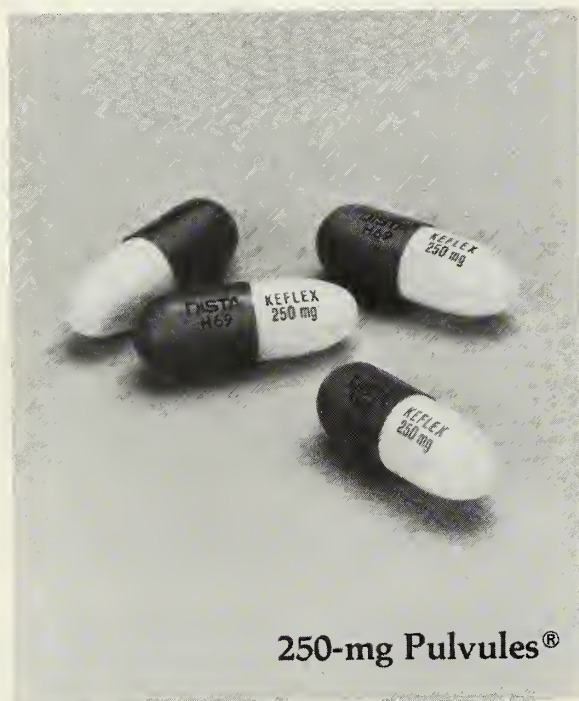
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STATE DEPARTMENT/ PUBLIC HEALTH

DEAFNESS — A COMMUNICATION DISABILITY

CHAPTER 121 (designated Chapter 601 I in Volume III, Code of Iowa, 1981), Acts of the 66th General Assembly, became law in 1975. This led to the creation of Deaf Services of Iowa (DSI), a service program for deaf citizens. This program is not only unique to Iowa history, but also novel on a national level. Iowa was the sixth state to have such a government-supported agency in the area of deafness; as of 1980, there were 15 such state programs. These programs are situated variously in the different states' governmental structures — in Iowa, DSI is a part of the State Department of Health, Community Health Division.

As of 1980-81, state appropriations support these DSI positions: a director, an assistant director/interpreter-coordinator, two clerical staff, and three sign language interpreters. The sign language interpreter positions are dispersed into 3 main regions across the state — Eastern, Central and Western.

The basic function of DSI is to advocate, coordinate, and implement state-wide services for all deaf Iowans of any age or ability by 1) assuring that health, social, mental health, personal, legal and related services are accessible; 2) establishing and maintaining cooperative relationships with public and private agencies and organizations to help them in making their services accessible and conveying to them the

nature of deaf persons' needs; and 3) planning and implementing specialized programs and/or legislation which will provide non-existing aid to deaf persons. Initial focus is on the sign language speaking deaf people who generally have been deaf since early childhood and who face the most difficult assimilation into society because communication accessibility is limited or nonexistent.

Program components include: 1) a Library On Deafness for use by all interested citizens; 2) direct sign language interpreter services to aid communication between deaf and hearing persons — usually at no cost to either party; 3) advocacy, consultation, and referral services in any situation involving deaf persons; 4) public speaking on deafness-related topics to any interested deaf or hearing groups; 5) coordination, referral and/or teaching of sign language classes; 6) distribution of our free newsletter, "Sign of the Times"; 7) direct assistance to deaf persons in need; 8) public distribution of information on various aspects of deafness; 9) assisting with necessary legislation to better the lives of deaf Iowans; and 10) tabulating the numbers of deaf Iowans (census registry) and collecting descriptive population data.

General programmatic input is provided by a 7-member Governor-appointed advisory committee, by other deaf persons, professionals, advocates and volunteers. The goal is that such interdisciplinary and collaborative efforts will bring improved services to deaf citizens in Iowa.

MAJOR DEAFNESS FACTORS

A program such as DSI spotlights the needs of deaf people as a disabled minority who, in general, are continually subjected to inequities of opportunity and services. To understand this specialized service program and the deaf person's need for greater accessibility to all facets of life, it is imperative to first understand the disability. Hearing impairment is commonly a misunderstood disability because it produces such a wide variance of individual differences. Hearing impairment does indeed make the hearing of noise or sound difficult or impossible but it goes beyond that. This invisible handicap can distort or completely sever communication. This is the crux of the handicap because communication is the vital link among people — through communication we develop

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STATE DEPARTMENT/PUBLIC HEALTH

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relationships with family and others, are formally and informally educated, and maintain an understanding of the changing world. It should help to discuss briefly 3 factors that bear upon the communication barrier and contribute to individual differences among the hearing impaired population: 1) the degree and type of hearing loss; 2) the age of onset of deafness; and 3) the educational background of deaf persons.

1. *The degree and type of hearing loss.*

Hearing impairment, like most disabilities, can be depicted on a continuum ranging from a mild loss (hard of hearing) to a profound loss (deaf). A *hard of hearing person* has a mild hearing loss and, depending on the loss characteristics, can usually overcome the communication barrier by aiding the hearing he or she does have with amplification, lipreading, and added attentiveness. A *hard of hearing person* is usually able to discriminate both sound and speech. A *deaf person* has a profound hearing loss with little or no residual hearing. Many deaf persons are able to hear and/or discriminate some sounds; most cannot hear and/or discriminate speech, regardless of the amplification. Abilities to lipread and discriminate sounds vary, depending 1) on the amount of training one receives, 2) on the amount of residual hearing, if any, one has, and 3) whether amplification benefits the residual hearing one might possess.

Deaf people, therefore, have many more difficulties in overcoming the sound barrier and the communication barrier than other hearing impaired persons. The deaf person has an isolation factor that must be recognized since the auditory sense is dysfunctional for daily interaction. If the majority of deaf people do not receive appreciable amplification from a hearing aid for discriminating speech or sometimes even hearing sound, and cannot rely extensively on lipreading for most of their information, then *hearing* the slight murmurings of a voice will not always mean a deaf person *understands* that voice. In addition, seeing a mouth form phrases without the accompaniment of sound is often-times meaningless unless a deaf person watches intently within close range on a one-to-one basis without

much distraction, and with the phrases being common and/or within a known context. Fast moving, in-depth discussions, new and different topics, and leisure group conversations which are seen silently rolling off various tongues are most often of little significance and/or partially or completely missed by most deaf people. When approximately 50% of the phonemes in the English language look alike on the lips, the deaf person can tire easily from endless guesswork, even if he or she keeps up with some of the fast-paced verbal exchange. Inconsistencies may arise if the hearing range differs in a person's left ear or right ear, or if a hearing loss varies from one day to the next, also adding to the confusion. Regardless of which factors are involved in each individual deaf person's type of hearing loss, it is usually difficult for hearing people to be sensitive to this invisible disability. It should be made clear, however, that the degree and type of hearing loss does impede the communication process in many diverse ways and does make a significant impact on the deaf person's *inclusion into or exclusion from* the world of talk, joking, instruction, verbal sharing and every other kind of spoken utterance which, in essence, comprise the world of communication.

2. *The age of onset.*

Another important distinction must be made between those who are early-in-life deafened and those who are later-in-life deafened. All too often this distinction is completely overlooked and/or misunderstood.

A child who is deafened *early-in-life*:

A. May be born deaf with the result that the native language of his or her parents, family and community is never heard. Research in child development indicates that spoken and later written language is learned by "hearing" language. A child who cannot consistently hear the sounds and patterns of a language will have extreme difficulty in speaking, reading or writing that language as a primary language. That is why few congenitally deafened people master the English language in our American culture. They are almost like foreigners within their own country and American Sign Language, instead of English, generally has become their primary language if they reside in the United States.

B. May be born hearing, but become deafened before much language is learned, or

later on during the stage of development when language acquisition becomes refined and perfected. Such persons may have a basic English vocabulary, but have difficulty in understanding deeper meanings of more advanced words, phrases, or idiomatic expressions and difficulty in correctly using the proper verb tenses and/or grammatical structure of the language. This often results in the deaf person understanding some but not all of what is being communicated regardless of whether it is spoken or written.

On the other hand, *later-in-life* deafened people lose their hearing after language (in its various forms — speech, reading, and writing) has been fully developed and they generally retain full usage of their primary language (and any others learned) except in one form — the listening or receptive mode of speech. This subgroup continues to talk for themselves, write as fluently as they did before deafened, and are avid readers of the printed word; for most later-in-life deafened Americans, English will continue to be their primary language whether they later learn and use sign language or not. However, the difficulties arise when they are no longer able to hear and understand what others say to them in person, on the telephone, television, or radio. What is not written is often unknown to them, and thus, later-in-life deafened people are also somewhat isolated and uninformed, but not to the extent as that of early-in-life deafened persons.

3. *The educational background.*

Another important distinction to be made that correlates with the degree and type of hearing loss and the age of onset of deafness is the educational background of deaf persons — informally in the home and community and formally in the classroom. As stated earlier, the primary language of most early-in-life deafened persons in the United States is not English, but American Sign Language (ASL).

ASL is the fourth most commonly used language in the United States. ASL is predominantly a manual language rather than a written or spoken language; it incorporates the use of signs and fingerspelling with the hands, and specific body and facial movements. It is unlike English in its grammatical structure and if written, appears to be poor English. Linguistic research is being undertaken in various language laboratories to further analyze the components of this highly complex, visual — gestural lan-

guage. Other sign language derivatives from ASL that many deaf children have been learning in the past decade (which follow English word order and syntax more closely) can be generally termed Manual Coded English or Signed English Systems.

Until recent years this visual means of expression was not taught or used in the home prior to the deaf child's attendance at school at around the age of five, nor reinforced later in the home as the child grew. That is, not unless the parents in the home were deaf. The main reason is that 90% of the parents of early-in-life deafened children are hearing parents, usually with neither prior knowledge nor experience with deafness. This void of a communication experience existing among most parents and families in the majority of their deaf children's early lives is significant in terms of hindering language development in the formative years, and makes the learning of English as a primary language in the purest sense almost impossible and as a secondary language even difficult. This is reflected in the poor English language usage in most of today's early-in-life deafened adult population — even if they are fluent signers. Often signing was not even permitted in the early years of a child's schooling, which delayed again the development and usage of any language. This has changed dramatically in the past decade as educators of deaf children have promoted the use of sign language beginning in the preschool years at home and in school. Perhaps this early intervention may change the characteristics of the future adult deaf population, but the fact still remains many deaf adults today experienced these great voids in language learning when they were children and thus, many experienced great voids in subsequent academic learning.

The absence of communication in the younger years of a child's growth not only can impede language development and academic learning, but also can hamper or delay social skill development and eliminate or distort general knowledge of our culture that is usually not even taught in the classroom, but rather learned by overhearing conversation, family sharing at the dinner table, exchange among co-workers on the job, through the media, and via other spoken sources.

Consideration of these 3 major factors that contribute to individual differences among the hearing impaired population has ramifications

for all, but becomes critical in the study of early-in-life deafened persons in particular. The ability to speak, read, write and understand the English language often becomes the "measuring-stick" others use in unofficially determining a person's I.Q. or abilities and thus determines whether certain deaf people will be: (1) enrolled in schools or training programs, (2) hired for a job even if it does not require communications skills, (3) promoted to a more responsible or higher paying job, (4) told all of the facts involved in a problem, or (5) included in other decisions or actions. Tests required by employers for hiring or promotion end up testing the early-in-life deafened person's ability to decipher English grammar rather than actual job skill or knowledge. Service agencies or employers who advertise only

on television or radio about available assistance or job openings never reach deaf people; written information regarding such may not be fully understood by early-in-life deafened persons. Intake forms or applications may pose additional problems in understanding the English sentence structure for early-in-life deafened persons. These are only a few of the myriad of possible events that translate directly into economic consequences for many deaf Iowans, or in respect to community services, leave many deaf Iowans unserved or underserved.

RECENT FEDERAL LAWS

Communication hardships encountered by many deaf citizens are unique to this disabled

(Please turn to page 34)

November 1981 Morbidity Report

Disease	Nov. 1981 Total	1981 to Date	1980 to Date	Most Nav. Cases Reported From These Counties
Amebiasis	1	19	9	Jahnsan
Brucellosis	3	7	6	Cheraukee, Story, Wapella
Chickenpox	604	7849	8300	Linn, Palk, Buena Vista
Cytomegalavirus	2	29	25	Dubuque, Jahnsan
Eaton's Agent infection	12	44	18	Marshall, Palk, Clinton
Encephalitis, viral	6	31	34	Cerra Garda, Madison Palk
Erythema infectiosum	7	1169	420	Pattawattamie, Decatur, Hardin
Gastroenteritis (GIV)	1568	15820	17551	Linn, Palk, Scott
Giardiasis	17	127	38	Palk, Linn, Scott
Hepatitis, A	10	203	180	Palk, Boone, Clay
Hepatitis, B	3	84	92	Black Hawk, Jahnsan, Linn
type unspecified	3	54	72	Black Hawk, Muscatine Story
Herpes Simplex	26	235	107	Jahnsan, Scott, Linn
Herpes Zoster	1	8	3	Palk
Histoplasmosis	3	15	26	Palk, Dubuque
Infectious mononucleosis	41	279	342	Linn, Black Hawk, Scott
Influenza, lab confirmed	0	191	110	
Influenza-like illness (URI)	4652	59717	59363	Linn, Palk, Jahnsan

Disease	Nov. 1981 Total	1981 to Date	1980 to Date	Most Nav. Cases Reported From These Counties
Meningitis				
aseptic	1	71	68	Winneshiek
bacterial	11	118	115	Linn, Palk, Siaux
meningococcal	1	26	13	Scott
Mumps	7	70	54	Linn, Black Hawk, Palk
Pertussis	1	7	2	Wapella
Rabies in animals	47	825	457	Story, Kassuth, Butler
Rheumatic fever	1	9	0	Hardin
Rubella				
(German measles)	0	4	9	
Measles	0	1	20	
Salmonellosis	22	250	171	Linn, Palk, Scott
Shigellosis	3	35	52	Clarke, Jahnsan, Siaux
Tuberculosis				
total ill	9	80	86	Black Hawk, Linn, Butler
bact. pos.	8	53	63	Black Hawk, Linn, Butler
Venereal diseases:				
Gonorrhea	437	4834	4591	Palk, Linn, Black Hawk
Syphilis	0	24	23	

Laboratory Virus Diagnosis Without Specified Clinical Syndrome: Guillain-Barre Syndrome — 1, Marshall; Legionnaire's Disease — 1, Jahnsan, 1, Scott; Scarlet Fever — 1, Des Moines, 3, Palk, 1, Pattawattamie; Blastomycosis — 1, Cerra Garda; Ascariasis — 1, Clinton, 1, Iowa; Coccidiomycosis — 1, Black Hawk; Echavirus — 1, Clinton, 1, Jackson, 2, Scott; Coccidiomycosis — 1, Palk; Malaria, 1, Palk; Campylobacter — 1, Bremer, 2, Cedar, 1, Clark, 1, Dallas, 5, Dubuque, 1, Hardin, 1, Marian, 3, Palk, 1, Webster, 1, Waadbury; Toxic Shock Syndrome, 1, Cerra Garda, 2, Jahnsan.

[illegible]

1. In education, *Public Law 94-142*. This Education For All Handicapped Children Act, passed by Congress in 1975, mandates a "free and appropriate education in the least restrictive environment" for all handicapped children. The date for implementation and compliance was October 1, 1978.

3. In the area of physical accessibility, *Section 502* of the Rehabilitation Act of 1973. This law states that buildings must be usable by handicapped people.

5. In employment, education and public services, *Section 504* of the Rehabilitation Act of 1973. This law mandates that handicapped people shall not be discriminated against under programs receiving money from the

New programs, laws and regulations have been crucial in providing a legal-base and a knowledge-base to encourage equal opportunity for disabled people and to stop discrimination against handicapped citizens; however, there remain many inequities. For deaf people, their communication handicap is invisible and widely misunderstood. Most people understand physical or architectural barriers that wheelchair-bound persons encounter, but few understand the communication barrier of deaf persons. Until employers, service providers, community workers, and others understand the limitations of the disability of deafness, they cannot actively focus on the *abilities* of the people so afflicted — and thus, make appropriate and meaningful adaptations so that deaf people can contribute fully in the mainstream of society. Deaf Services of Iowa is available to assist hearing persons/services make the necessary adaptations so that deaf people can have freer communication accessibility.

(Please turn to page 35)

NEWS/PRODUCTS, PROGRAMS, ETC.

Information on various products, programs, etc., is received regularly by the IMS JOURNAL. Here are short items sifted from the mail by the Scientific Editor. A reference to a specific product is not intended to suggest any particular endorsement. Additional information on any entry may be obtained by contacting the IMS JOURNAL.

SOME NEW BOOKS

HARPER'S REVIEW OF BIOCHEMISTRY, 1981, 18th edition, by D. W. Marlin, P. A. Mayes and V. W. Rodwell. Lange Medical Publications, Los Altos, California. Price, \$18.00.

PHYSICIAN'S DRUG MANUAL, 1981, Biomedical Information Corporation, Doubleday & Co. Inc., New York. Price, \$17.95.

ANEURYSMAL SUBARACHNOID HEMORRHAGE (Report of the Cooperative Study), 1981, by Adolph L. Sahs, editor, Urban & Schwarzenberg Medical Publishers, Baltimore, Maryland, Price, \$32.50.

CURRENT SURGICAL DIAGNOSIS AND TREATMENT, 1981, 5th edition, by J. Englebert Dumphy and Lawrence W. Way. Lange Medical Publications, Los Altos, California. Price, \$25.00.

STATE DEPARTMENT/PUBLIC HEALTH

(Continued from page 34)

dences throughout the state.

In addition, a survey was conducted of 657 deaf adults by interviewers using sign language who went to the persons' homes. Major areas covered in the survey questionnaire in-

THE COMPLETE NEW GUIDE TO PREPARING BABY FOODS, 1981, by Sue Castle. Doubleday & Co. Inc., New York. Price \$13.95.

CURRENT MEDICAL INFORMATION AND TERMINOLOGY, 1981, 5th edition, by Asher J. Finkle, American Medical Association, Order Dept. OP-337, P.O. Box 821, Monroe, Wisconsin 53566. Price, \$20.00 + \$4.00 postage & handling.

DRUG ABUSE: A GUIDE FOR THE PRIMARY PHYSICIAN, 1981, American Medical Association, Order Dept. OP-323, P.O. Box 821, Monroe, Wisconsin 53566. Price, \$15.00 + \$2.00 postage & handling.

GENERAL UROLOGY, 1981, 10th edition, by Donald R. South. Lange Medical Publishers, Los Altos, California. Price, \$19.50.

LIFELONG SEXUAL VIGOR: HOW TO AVOID AND OVERCOME IMPOTENCE, 1981, by Marvin B. Brooks. Doubleday & Co. Inc., New York. Price, \$12.95.

CLINICAL CARDIOLOGY, 1981, 3rd edition, by M. Sokolow and M. B. McIlroy, Lange Medical Publishers, Los Altos, California. Price, \$21.50.

REVIEW OF MEDICAL PHYSIOLOGY (Continuation of a well-established series), 1981, 10th edition, by William F. Ganong. Lange Medical Publishers, Los Altos, California. Price, \$17.00.

THE CHANGING YEARS: THE MENOPAUSE WITHOUT FEAR (An insight of what it is all about for the middle-aged patient), 1981, by Madeline Gray. Doubleday & Co. Inc., New York. Price, \$13.95.

cluded: population description, family composition, communication methods, consumer and community services, education, employment and aids to daily living. The 1980 Iowa Deaf Census and Survey Report contains approximately 200 pages of discussion and tabulations. A summary version of the larger manuscript will also be made available. Anyone interested in obtaining a copy of this report can do so by contacting Deaf Services of Iowa.

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ABOUT IOWA PHYSICIANS

Dr. John W. Eckstein, dean of the U. of I. College of Medicine, recently received the American Heart Association's Gold Heart Award. . . . **Dr. Shirley E. Beshany** recently opened a solo practice of cardiovascular surgery in Des Moines. Dr. Beshany's new location is at 1026 Fourth Street in Des Moines, and is known as the Des Moines Heart and Surgery Clinic, P.C. . . . **Dr. Charles Argo**, Oskaloosa, was appointed county medical examiner at a recent meeting of the Mahaska County Board of Supervisors. . . . **Dr. Joseph L. Monahan**, Clinton, recently completed a course in laparoscopy at the University of Kansas Medical Center in Kansas City. The Scott County Medical Society recently observed its 125th anniversary at a dinner at the Blackhawk Hotel in Davenport. Principal speaker at the event was **Dr. Hoyt D. Gardner**, past president of the American Medical Association. **Dr. James F. Bishop**, longtime Davenport physician, reflected on the history of the Scott County Medical Society.

Dr. Ron Miller, Council Bluffs, **Dr. Mark Thoman**, Des Moines, and **Drs. James Coker, C. Bainbridge**, and **Larry Foster**, all of Sioux City, were program participants at a summer educational conference of the Iowa Physician's Assistant Society. Dr. Miller spoke on "Hip and Knee Replacement Arthroplasty," Dr. Thoman, "Adult and Pediatric Accidental Poisoning," Dr. Coker, "Common Cardiac Arrhythmias," Dr. Bainbridge, "Acute Pulmonary Edema," and Dr. Foster, "Acute Care of Burns." . . . The Cherokee City Council recently honored **Dr. Don Koser**, longtime Cherokee physician, by renaming Spring Lake Park, the Koser-Spring Lake Park. Dr. Koser

played a major role in transforming the area from a gravel pit in 1940 into one of Cherokee's most popular parks. He has served 41 years on the Cherokee Parks and Recreation Commission. . . . **Dr. Maurice K. Borklund** joined the Leon Clinic in November. Dr. Borklund received the M.D. degree at Indiana University College of Medicine; interned and served his surgery residency at Kansas City General Hospital in Kansas City, Missouri. Dr. Borklund was formerly chief of surgery at Kay Hospital in Parsons, Kansas. . . . **Dr. Luke Tan**, Waterloo, addressed a recent family workshop for the asthmatic child at Schoitz Memorial Hospital in Waterloo. . . . **Dr. Robert Dunn**, Keokuk, participated in a recent tutorial on percutaneous transluminal angioplasty at Alexandria Hospital in Washington, D.C. The tutorial focused on current methods and materials for T.A. transluminal angioplasty.

Dr. William R. Bliss, Ames, was guest speaker at a recent meeting of the Wright County

Medical Society. Dr. Bliss spoke on "Rising Health Care Costs." . . . **Dr. Dale Nystrom** has joined **Drs. L. J. Willekes** and **R. A. Jongeward** in family practice in Sioux City. Dr. Nystrom received the M.D. degree at the University of Minnesota; interned at Kalamazoo, Michigan and served his family practice residency in Sioux City. . . . **Drs. John L. Bailey** and **Aaron P. Randolph** recently celebrated their 25th year of providing medical service in Anamosa. Dr. Bailey received the M.D. degree at the U. of I. College of Medicine and interned at Great Lakes Naval Hospital in Great Lakes, Illinois. In 1956, he joined Anamosa **Drs. John D. Paul** and **Gerald F. Brown**. Drs. Bailey and Brown still practice together at the Broadway Medical Clinic. Dr. Randolph received the M.D. degree at the U. of I. College of Medicine and interned at Broadlawns Hospital in Des Moines. He practiced medicine in Burlington for 14 months prior to opening his solo practice in Anamosa in 1956. . . . **Dr. Tom Smith**, Ames, was guest speaker at a recent meeting of the American Academy of Otolaryngology. Dr. Smith discussed head and neck anatomy.



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. . . **Dr. Frederick J. Lohr**, Sioux City, was named Physician of the Year at the annual meeting of the Iowa Health Care Association. Dr. Lohr was cited for his many years of special service to nursing home residents. . . . **Dr. Leo A. Milleman**, Ames, presented a lecture on "Human Penile Lesions and Impotence" to Iowa State University veterinary medicine students.

Dr. Edward G. Nassif, Ames, was guest speaker at a recent meeting of the American Medical Veterinarian Association. Dr. Nassif spoke on "Occupational Asthma and Allergies." . . . **Dr. John H. Lohnes**, Cedar Rapids, was named council speaker of the American College of Radiology at the recent ACR annual meeting. Dr. Lohnes is associated with Cedar Rapids Radiologists, P.C., and is also a clinical instructor of radiology at the U. of I. College of Medicine. He is a fellow of the American College of Radiology and has served as vice-speaker of the council since 1979. . . . **Dr.**

Thomas A. Carlstrom recently joined **Dr. Robert A. Hayne** to practice neurosurgery in Des Moines. A native of Spencer, Iowa, Dr. Carlstrom received the M.D. degree at the U. of I. College of Medicine and served his neurosurgery residency at Bethesda, Maryland and University Hospitals in Iowa City. Prior to locating in Des Moines, Dr. Carlstrom was on the staff at the Naval Hospital in San Diego, California. . . . **Dr. Keith A. Shaw** has joined **Drs. Paul J. Laube, Luke C. Faber** and **R. V. Mullapudi** in the practice of general surgery in Dubuque. Dr. Shaw recently completed his surgery residency at the U. of I. College of Medicine. . . . **Dr. Robert Gitchell**, Ames, was guest speaker at the annual meeting of the Iowa Academy of Family Physicians. Dr. Gitchell spoke on "Stress Injuries of the Lower Extremity."

Dr. Robert Savereide, Cedar Falls, recently was inducted into the American College of Surgeons.

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FAMILY PHYSICIAN NEEDED — Looking for family physician to join 2-man group. New office building on grounds of JCAH accredited hospital. Community of 5,000 close to Cedar Rapids and Iowa City for easy referral. Contact John L. Bailey, M.D., Broadway Medical Clinic, Anamosa, Iowa 52205. Phone 319/462-3571.

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FACULTY MEMBER FAMILY PRACTICE PROGRAM — The Black Hawk Area Medical Education Foundation is seeking a Board Certified Family Physician for its Family Practice Residency Program in Waterloo, Iowa. The program is community-based, affiliated with U. of I. College of Medicine, and part of Iowa Network of Family Practice Residency Programs. The Waterloo metro population is 125,000. There are 4 hospitals, and a good medical specialty representation. Applicants should

have M.D. degree, be eligible for Iowa licensure, and have several years of practice experience. Duties include teaching residents patient care, including obstetrics, and also providing patient care. Other duties include program administration and assisting in research. Salary range — \$60,000 per year — with an additional 20% fringe benefit package. Other fringe benefits relating to retirement, moving expenses, and continuing education provided. Please submit your resume to: Charles A. Waterbury, M.D., Program Director, Black Hawk Area Medical Education Foundation, 441 East San Marnan Drive, Waterloo, Iowa 50702. 319/234-4419. Equal Opportunity Employer.

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MEDICAL DIRECTOR — FULL TIME — To supervise patient care for 15,000 family planning patients. Must have experience in providing basic gynecological care, and experience in or willing to be trained to provide abortion and vasectomy services. Send CV to Dr. Joe Hall, Planned Parenthood of Mid-Iowa, P. O. Box 4557, Des Moines, Iowa 50306.

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Good Member Participation

AS WE START the new year this space might serve well as locus for a few general comments about the Iowa Medical Society. Very often we make excessive assumptions, e.g., that everyone, including each IMS member physician, knows quite precisely why and how the Society functions.

That level of understanding is surely the target at which we aim. But reality says a full bullseye performance is not possible, when you factor into the *understanding* equation the span of interest, the time-availability and the professional responsibilities of the parties involved.

Acknowledging the variation in level of understanding, it is heartening to see the high acceptance by Iowa physicians of their state professional organization. The percentage of eligible members who belong to the Iowa Medical Society is at or just above 90. This high membership supports at least two assumptions: (1) Iowa physicians see the need for a professional entity to pursue causes they believe to be in the interest of the public and the profession, and (2) they accept those Society efforts which are being put forth currently.

The purposes of the Iowa Medical Society are simply stated in the governing language. They are *to promote the science and art of medicine and the betterment of public health; to bring together and organize the medical profession of the State of Iowa; and to unite with similar associations in other states to form the American Medical Association.*

Against this backdrop stand the more than 3,000 Iowa physicians who hold one of several forms of membership. By far the majority of these physicians are individuals holding *Active Membership*. These Iowa-licensed practitioners are members of component societies (county medical societies) who pay their annual IMS dues and deliver the bulk of the medical care to

the state's population. The *Life Member* status is reserved for the senior physician who has practiced 50 or more years and has been a member of the Iowa Medical Society the last 15 consecutive years. The *Associate Member* designation is for the physician who is retired and/or incapacitated. There is a *Resident Physician Member* provision generally for the doctor who is in early postgraduate training. There is also *Medical Student Membership* available to those in their undergraduate medical education years. A final category of *Honorary Member* exists for rare and special use and is the only portal whereby a layman may gain IMS affiliation.

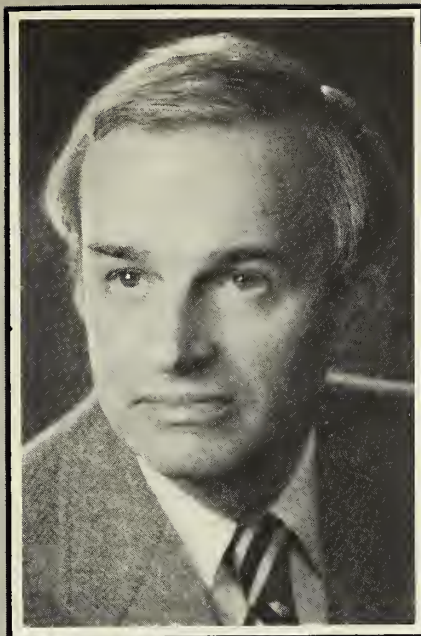
In noting these IMS membership classifications, be mindful of the ascending nature of participation within the medical profession. The individual physician first joins his/her county medical society; the option then is available to become an IMS member (and 90% do); and finally a choice follows to affiliate with the American Medical Association (and again a high percent of the 90% so choose).

The Iowa Medical Society addresses those important matters which affect the delivery of medical care. This means clear and definitive representation before legislative and other governmental bodies; it means liaison with other health groups; it involves deliberations with private third-party financing organizations; it includes representation with business/industry; and it involves public relations, with emphasis on positive communications with patients, their families and the public.

This work with different segments of the population is challenging and follows prescribed directions. The goals of the Iowa Medical Society are charted by elected physician representatives who form a House of Delegates and an Executive Council. As with most endeavors, the achievements of the medical profession in Iowa are directly proportionate to the interest and participation by the practicing physicians. Fortunately, this participation has been excellent in recent times.



PRESIDENT'S PRIVILEGE



THE NATIONAL HEALTH PLANNING and Resources Development Act of 1974 established 204 health system agencies (HSA). In addition, the law mandated state health planning and development agencies and statewide health coordinating councils to look at health care needs from a statewide perspective.

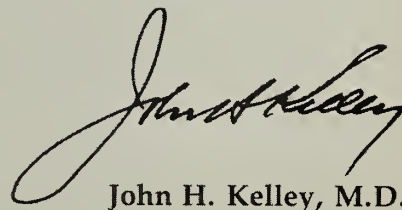
Recently, the General Accounting Office (GAO) reviewed and evaluated the performance of the HSA's. The results gave little comfort to professional health care planners, for they indicated a disturbing pattern of over ambitious goals, unmeasurable objectives and unfounded claims of savings. The report provided extensive evidence along with many specific examples of the inadequacies of formal mandated health planning.

The GAO report concludes: "The work we have done in analyzing the agencies savings estimate and in developing information on how HSA is planning to evaluate program impact suggests that making impact evaluations of health planning is very difficult and may not produce clear evidence concerning the successes or shortcomings of health planning organizations."

The GAO report casts doubt on the ability of an agency to be effective in mandating the development of our health care system when there is no objective way to evaluate its performance.

Is there any value at all in health planning? This is a question that perplexes all concerned health care providers. We know there are instances of unnecessary and expensive expansion of health care facilities which have the effect of escalating health care costs, but we recognize the reverse side of the coin is just as big a problem.

There is a growing feeling we still have a unique pluralistic health care system in which the marketplace can be made to work better than many previously thought. Voluntary health planning has a definite place in a marketplace atmosphere, and if it is privately financed and concerned primarily with fact finding it can be of real value. We don't want to forget health planning but a critical look at what we have been doing since 1974 is in order.



John H. Kelley, M.D.

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THINGS YOU SHOULD KNOW

1982 IMS SCIENTIFIC SESSION

Talk about interesting topics and speakers! The 1982 IMS Scientific Session will have them! For most of 3 days (April 6, 7 and 8), this year's Iowa City confab will impart the latest on stress management, nutrition, health care costs, health manpower, etc. Three "What's New in Medicine" panels will be offered. Concurrent "Doctor's Choice" sessions will cover medicine, surgery, ob/gyn, pediatrics, psychiatry and neurology. Reserve the dates! Room reservations may be made directly with Highlander Inn (800/272-6444).

DEATH OF DON TAYLOR

Former IMS EVP Donald L. Taylor died January 11 at his home in Fallbrook, California. His funeral was January 15 in Des Moines. Don retired in 1975 after 30 years' employment with the Society. He is survived by his wife, Darlene, a daughter, Deborah Leighter, a grandson, two brothers and three sisters. A tribute to Don appears as this month's In The Public Interest.

NURSING STANDARDS

The Iowa Board of Nursing continues to pursue new and expanded administrative rules. Main concerns of the IMS were voiced at a January 14 public hearing by Don Sweet, M.D., Des Moines. These were (1) duties performed by nurses as employees in the physician's office, and (2) use of professional nursing judgment in adapting a medical regime based on patient circumstances with timely notification to the physician. The Board of Nursing must decide about modification of the present draft before filing with the Rules Committee.

1982 HOUSE OF DELEGATES

February and March are the months for 1982 IMS district caucuses. A caucus schedule is in the February IMS UPDATE. These sessions are conducted by the councilors to (1) identify candidates for IMS offices, (2) select representatives to the Nominating Committee, and (3) discuss current issues.

ANY RESOLUTIONS FOR THE HOUSE

The opportunity is now available to county medical societies to submit resolutions to the 1982 House of Delegates which meets May 1-2. Early introduction of resolutions is urged so they can be published in the delegates' handbook. Background info (with a sample resolution) was in the January IMS UPDATE.

GOVERNOR BACKS MEDICAID BOOST

In his January 14 State of the State address, Iowa Governor Ray concurred with IMS views on the need for a supplemental Medicaid appropriation. It is estimated \$22 million extra will be needed in the next two state budgets to keep Medicaid at its current minimal reimbursement level. The Governor also backed a central administration (in the Department of Health) to handle administrative aspects of the licensing of health professionals.

MARCH 25 SPORTS CONFERENCE

Five hours of Category I credit will be available to physicians attending the March 25 Conference on Medical Aspects of Sports in the Olmsted Center at Drake University. The event is a project of the IMS Committee on Sports Medicine, Iowa High School Athletic Association and Drake. The program was sent with the February IMS UPDATE.

DRUG DIVERSION SCHEME

Iowa physicians are alerted to a drug scam being carried out by an elderly man and his "daughter" or "niece." The Drug Enforcement Administration has warned of such activity in at least 7 midwest states by a man showing a scar allegedly from cancer surgery and requesting a 100-dose Rx for hydromorphone. Any contact of this nature should be reported to the police or Iowa Board of Pharmacy (515/281-5944).



QUESTIONS - ANSWERS

GILBERT R. CLARK, M.D.
Waterloo, Iowa

Dr. Clark is president of the now emerging Cedar Valley Independent Practice Association. He is a veteran Waterloo physician whose specialty is pathology. He comments here on the effort to date in conceiving and implementing a new Iowa HMO/ IPA.

A NEW HMO/IPA

The second Iowa health maintenance organization will operate in Waterloo. Would you describe its organization briefly?

Probably the easiest way to describe the organization of this health maintenance organization (HMO) is to review the attached flow chart with a brief description. The Cedar Valley Health Plan is composed of an HMO and an independent practice association (IPA), which are nonprofit corporations. The board of directors of the HMO, at this time, is composed of 2 laymen who are representatives from Deere & Company and 2 practicing physicians who are also members of the IPA board of directors. Employers and hospitals, as well as other health care providers, contract with the HMO for services. The HMO contracts with the IPA, whose board is composed of 12 practicing physicians. The IPA contracts with individual physicians who agree to a 12-month guarantee of fees which are also reviewed and approved by the IPA fee review committee. Participating physicians continue to practice in their own office locations and provide medical services to the enrollees of the employers who have contracted with the HMO. The physicians main-

tain freedom of choice of patients, as do the patients who have the freedom of choice of physician. The HMO and the IPA employ one executive director who reports to each board of directors.

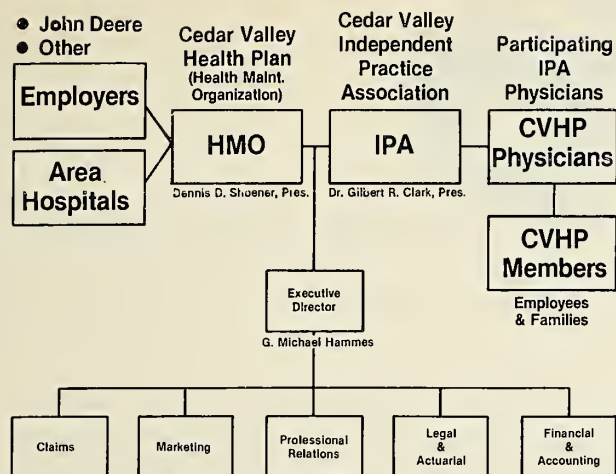
The physicians in your area have been considering the pros and cons of the HMO approach for some time. Would you comment on the "spade work" that's been done?

Early in 1979, Deere & Company contacted the Black Hawk County Medical Society with a request that the Society consider the IPA as an alternate means of providing medical care. In response to that request, the Black Hawk County Medical Society appointed an IPA/HMO study committee which met 12 times during the calendar year. Deere is an advocate of fee-for-service medical practice with freedom of physician choice by patients. In 1979, hospital utilization (under age 65) in Black Hawk County was between 1,100 and 1,200 hospital days per 1,000 population, which was found to be higher than 5 other Iowa areas for which figures were then available.

Savings in the IPA/HMO model are expected to be realized through reduced hospital inpatient utilization which will allow expanded outpatient benefits for enrollees. Deere was complimentary of the quality of medical care provided in the Black Hawk county area, but concerned that they could not continue to support the rapid escalation of cost; for example, in 1972, Deere's health care benefits cost \$6 million for its Waterloo operations. By 1978, the cost increased to \$20 million, and in 1980, it was \$30 million. Some of the increase was a result of expanded benefits and additional employees, as well as increased availability of medical services. It is estimated that if costs continue to rise as they have in the last 5 years, Deere will spend \$1 billion for health care through its Waterloo operations during the next 10 years. The Black Hawk County Medical Society IPA/HMO study committee visited Denver, Colorado and Minneapolis, Minnesota to view on-site functioning IPA/HMO's. On December 18, 1979, the Black Hawk County Medical Society, without dissenting vote, "endorsed and supported fee-for-service medical care delivery system which provide the patients freedom of physician choice and assure

(Please turn to page 55)

HMO/IPA FLOW CHART



that appropriate standards and quality care are perpetuated which prove to be cost effective. . . ." The county society recognized, "that physicians, as independent practitioners, must exercise their own good judgement as to how each may best serve his patients while maintaining the standards and quality of medical care expected in our community."

During 1980, there were brief continuing, but not as intensive, contacts with Deere & Company, while additional data was provided to us, not only in our geographic area, but comparisons of IPA/HMO's in other parts of the country. Early in 1981, organizational meetings were started, and on June 8, 1981, IPA articles of incorporation were filed. The certificate of need was granted in December, 1981, and the certificate of authority from the Insurance Commissioner is expected in the near future. Briefly, these nearly 3 years may be summarized as an educational experience with a frank and open exchange of information between the medical community and industry.

Could you tell us in a little more detail about the Individual Practice Association (IPA)? Do you anticipate good physician participation?

The Cedar Valley Health Plan Independent Practice Association (IPA) will use existing facilities and local physicians. Enrollees may select any physician who participates, and all of the physicians in our geographic area will have the opportunity to join. They will practice in their own offices, with their own office staffs without expensive duplication of additional

medical facilities, and they will practice on a fee-for-service basis. This stands in contrast to the group practice association (GPA) form of prepaid health care in which physicians practice in a single, multispecialty group and are paid a salary. In a GPA, the patient must either pre-select or be assigned to the closed panel physicians. This of course disrupts the normal physician-patient relationship. It appears there will be good physician participation in the Cedar Valley IPA. Very few negative comments are heard now after 3 years of "spade work."

How would you describe the evolution of the project to date in terms of cooperation between Deere & Company and the medical community?

Working with Deere & Company during the past 3 years has been an interesting experience for all involved. Deere & Company's presentations, although at times distasteful, have always been frank and completely honest. Both Deere and the medical community have been faced with difficult situations. However, with a

(Please turn to page 61)

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Non-Invasive Vascular Testing In A Community Hospital

CURTIS W. NELSON, M.D.,
ANN E. HOEL,
and MITCH MORRISON, R.R.T.
Mason City, Iowa

The successful development of non-invasive vascular testing in an Iowa community hospital is explained. Findings from the 3-year experience indicate evaluation of veins and arteries can be performed accurately and safely — and sometimes make unnecessary hospitalization.

NUMEROUS ARTICLES have explained the usefulness of non-invasive vascular testing in large University Hospitals and other tertiary care centers. This paper will describe how the techniques developed by these centers can be applied to community hospitals with equally good results.

Mercy Hospital in Mason City, Iowa is a 312-bed community hospital which serves primarily a 9-county area in north-central Iowa. Carotid endarterectomies and peripheral vascular reconstructions have been commonly performed here since 1972. A non-invasive vascular lab was developed in August, 1977 to provide safe and accurate screening of patients with surgically correctable vascular lesions and suspected deep vein thrombosis.

The non-invasive vascular laboratory was established with personnel already employed in the Department of Respiratory Therapy. The medical director, technical director and two technicians were willing to learn and perform the non-invasive vascular exams which, at that

time, were being performed mostly in larger tertiary care centers located outside the mid-west.

After several visits to these tertiary care centers, the medical director chose Northwestern University's "Blood Flow Laboratory" after which to pattern the laboratory. This laboratory was chosen because it was doing well established non-invasive vascular tests which had already demonstrated high reliability, were safe, did not require extensive technician training, and could be applied in a community hospital setting.

The hospital administration agreed a non-invasive vascular laboratory would benefit patient care. A calculated risk was taken that these new procedures could be applied successfully to a 312-bed community hospital. The name of the department of Respiratory Therapy was changed to Cardio-Vascular and Pulmonary Services. Space and funds were provided to purchase equipment and train vascular technicians. The initial cost of setting up the lab in 1977 was \$20,673. The cost would be more today as both the cost of equipment and technician training have risen.

The medical director went to Tucson, San

Dr. Nelson is medical director, Cardio-Vascular and Pulmonary Services, St. Joseph Mercy Hospital, Mason City, Iowa. Mr. Morrison is the technical director and Ms. Hoel is the vascular technician.

THE SCANLON MEDICAL FOUNDATION/IOWA MEDICAL SOCIETY HAS DESIGNATED THIS ARTICLE AS THE HENRY ALBERT SCIENTIFIC PRESENTATION FOR THE MONTH OF FEBRUARY 1982

Diego, and Chicago to learn how to accurately interpret the test results. The technicians went to Tuscon, Arizona and Iowa City, Iowa for training. The non-invasive vascular training manuals developed at the University of Iowa by Dr. Robert Barns, Dr. Henry Russell, and Dr. Michael Wilson were purchased and studied. Articles from the medical literature were obtained and utilized.

Since the vascular lab was organized in 1977, it has performed over 3,000 procedures. In 1978 through 1980, there were 196 arteriograms or venograms performed on patients who had non-invasive evaluations. The non-invasive study correlated with the radiographic study in 191 cases for an accuracy rate of 95%. This compares favorably with results obtained at the tertiary care centers where the tests were developed.^{1, 6, 7} To date, there have been no complications from the tests.

The vascular laboratory evaluates the extracranial circulation, veins, and peripheral arteries. The results in these separate categories are as follows.

CAROTID EXAMINATION

Non-invasive carotid examinations are useful to evaluate asymptomatic carotid bruits, non-lateralizing neurologic signs, cerebrovascular status prior to major surgery, small or almost completely recovered strokes and transient ischemic attacks. The test requires a cooperative patient. However, of over 1,400 patients, there were only 3 patients who could not be studied. This reflects good physician understanding of the test and the conscientious attitude of the vascular technicians. This test should not be performed on a patient with an acute corneal abrasion. An artificial eye makes the results unreliable.

Both carotid phonoangiography and oculoplethysmography are used to evaluate the extracranial circulation. Neither test involves carotid compression nor have they produced any complications in over 1,400 tests.

Carotid phonoangiography (CPA) involves the use of a sensitive doppler microphone which assesses a bruit in the low, mid, and high carotid positions. It makes a permanent polaroid picture of the sound characteristics of a bruit. The test is performed while the patient lies comfortably on his back and holds his breath for a few seconds.

Oculoplethysmography (OPG) indirectly

measures internal carotid artery blood flow by comparing the flow of the first major branch, the ophthalmic artery, to the flow in the external carotid artery (measured by pulsations to the ear lobes) and the other ophthalmic artery. The diameter of the internal carotid artery generally must be reduced by 50% before reduction in blood flow occurs. The circulation to both ear lobes (external carotid artery) is first evaluated using small ear clips similar to clip-on ear rings. Following topical anesthesia to both eyes, small fluid filled cups are then applied to the eyes. These measure the circulation in each eye (internal carotid) relative to the ear circulation (external carotid) and to the circulation to the other eye. To confirm that any difference in this indirect measure of circulation is not due to instrumentation error, the test is repeated after switching the eye cups.

In 1978-1980, 1,121 non-invasive carotid examinations were performed. Hemodynamically significant internal carotid artery stenosis was indicated in 139 cases. No hemodynamically significant stenosis was found in 967. Abnormal and equivocal results were obtained in 15 cases. During this period, 68 patients had carotid arteriograms. Significant (>50%) internal carotid artery stenosis was found in 34 cases and no significant (<50%) internal carotid artery stenosis in 24 cases. There was agreement between the non-invasive exam and carotid angiography in 65 of these 68 cases for an accuracy rate of 95.6%. This compared favorably with the results obtained by the developing tertiary centers where accuracy rates varied from 87% to 90%.^{1, 2, 3}

The low cost, lack of complications, and accuracy of the non-invasive carotid exam make it a valuable tool in screening patients for surgically correctable internal carotid artery stenosis. Since the use of these exams, many patients with non-lateralizing neurologic signs or elderly patients with lateralizing signs have been spared the more expensive inpatient carotid arteriograms and its low, but always present, complication rate. Many patients have undergone arteriography and subsequent carotid endarterectomy following a positive non-invasive carotid exam. A report in JAMA shows that medically treated TIA patients with a positive non-invasive carotid exam have a 16.2% incidence of stroke whereas there is a 1.9% incidence with surgical management. The incidence of stroke with a negative



Figure 1. This photo illustrates the venous examination using the analogue recorder.

non-invasive carotid exam was only 2.2% in this study.⁴ Another study shows similar findings in patients with hemodynamically significant asymptomatic carotid bruits.³

The non-invasive carotid exam will not demonstrate ulcerated plaques or mild stenosis (less than 50% diameter reduction). Patients who are operative candidates with classical hemispheric TIA's would need to have carotid arteriography to demonstrate these surgically correctable lesions.

VENOUS EXAMINATIONS

The non-invasive venous examination is useful in identifying a patient with an acute deep vein thrombosis. It differentiates this potentially serious condition from a myriad of mimicing conditions such as chronic venous insufficiency, post phlebitic syndrome, congestive heart failure, arterial insufficiency, superficial thrombophlebitis, cellulitis, ruptured Baker's cyst, and subcutaneous hematoma. The examination can also identify subclavian vein thrombosis and, when requested, locate incompetent perforators prior to venous liga-

tion. The test requires that the patient lay in the supine position. There are no contraindications or complications associated with the test.

Two procedures are used to perform a non-invasive venous examination; impedance plethysmography (IPG)⁶ and doppler ultrasound.⁷

IPG detects acute deep vein thrombosis by indirectly measuring venous flow in the legs following a short period of venous compression. The patient lies supine with the hips and knees in mild external rotation and slightly elevated. An automatically deflating pneumatic thigh cuff is applied to the thigh and pumped to 45 mm H₂O for 45 seconds and released. Previously placed electrodes on the calf then measure the decrease in calf circumference following the release of the compressive thigh cuff. When a deep vein is occluded, the return of calf circumference to the pre-compressive level is much slower than normal. This can be recorded to give a permanent, objective record of the test.

Doppler ultrasound utilizes low frequency sound waves which bounce off red blood cells

(Please turn to page 60)

and return to the receiving crystal in the doppler probe. Movement of red blood cells produces a frequency shift which is used to determine the rate of blood flow in the veins. The posterior tibial, popliteal, superficial femoral/common femoral, and saphenous system are examined. An analogue recorder creates a permanent visual record of the venous blood flow. This test can also determine patency of veins in the upper extremities.

During the 3 year period from 1978-1980, 1,018 non-invasive venous examinations were performed. The exams were positive for deep vein thrombosis in 124 cases, negative in 807, and abnormal but not definitely positive in 88 cases. Venograms were subsequently performed on 57 of these patients, usually because the non-invasive examination disagreed with the attending physician's clinical impression. The venogram interpretation and the non-invasive venous examination were in agreement in 54 of these 57 cases for an accuracy rate of 94.8%. This demonstrates the difficulty of making an accurate diagnosis from clinical evaluation alone. The accuracy obtained by the developers of IPG and venous doppler examinations were 98% and 94%, respectively.^{6, 7}

These examinations were performed on outpatients in 226 cases. Acute deep vein thrombosis was found in 28 patients who were then admitted to the hospital for anticoagulant therapy. The 198 patients who had negative exams were not exposed to either expensive hospitalization or unnecessary hazards of anticoagulation therapy.

NON-INVASIVE PERIPHERAL ARTERIAL EXAMINATIONS

Non-invasive peripheral arterial examinations are useful in identifying patients with leg pain on exertion who have surgically correctable arterial lesions. It differentiates the pain caused by sciatica or other orthopedic problems from claudication. It localizes the area of occlusion or stenosis.

Both doppler ultrasound and segmental pressures are used to evaluate the patency of peripheral arteries.

The patient lies in the supine position, and the doppler ultrasound probe is placed over the common femoral, popliteal, dorsalis pedis and posterior tibial arteries in the legs. The analogue wave recorder converts the frequen-



Figure 2. Shown here is the peripheral arterial examination in process using the analogue wave recorder to obtain segmental arterial pressures.

cy change associated with the blood flowing in these arteries to a permanent visual record.

The characteristics of the wave form produced by each artery are used to determine the severity and level of the obstruction or stenosis. This test can be performed on the upper extremities and digits upon request.

Segmental pressures are obtained by placing blood pressure cuffs over the high and low thigh and the high and low calf. Using the doppler ultrasound to detect blood flow in the dorsalis pedis and posterior tibial arteries, the systolic pressure is obtained at each level. A segmental fall in pressure of 30 mm of Mercury indicates an occlusion of the artery just above that level. The ankle pressures are compared to the brachial pressures for what is called the ankle-arm index. An index of less than 1.0 indicates peripheral arterial disease in the lower extremity. Unless the physician ordering the test requests that exercise not be performed, the ankle pressures, both resting and after mild exertion on a treadmill, are measured. An inappropriate fall in ankle pressure coincides with claudication and indicates significant peripheral arterial disease.

Upon request, these pressures can be obtained on the upper extremities to assess the patency of the subclavian, axillary, radial, and ulnar arteries. Using small digital cuffs, the peripheral arteries in the digits can also be evaluated.

From 1978-80, 494 peripheral arterial examinations were performed without complica-

tion. Significant peripheral arterial disease was detected in 349 cases and no significant disease in 145 cases. During this time period, 86 angiograms were performed on these patients. The radiographic interpretation coincided with the non-invasive study in all 86 cases for an accuracy rate of 100%. Only 4 arteriograms were performed that confirmed no significant stenosis. These were performed to evaluate aneurysms rather than occlusive disease.

The high degree of accuracy and the lack of complications make the non-invasive peripheral arterial examination the test of choice for the diagnosis of peripheral arterial occlusion or stenosis. Arteriography, with its potential for complication, should be used to define the anatomy if surgical management is contemplated. The non-invasive tests can be used to assess the results of either surgical or medically treated patients. Several medical centers have also found it helpful in determining the likelihood that bypass graphs will remain patent and the level at which an amputation will heal.^{8, 9, 10}

SUMMARY

Non-invasive evaluation of veins and arteries can be accurately and safely performed in non-tertiary care settings with currently available technology. At St. Joseph Mercy Hospital in Mason City, Iowa, 2,632 non-invasive

vascular studies were performed from 1978-80 without complication. When compared to the 197 radiographic procedures performed on these patients, the accuracy of these tests was 95%. This degree of accuracy is achieved by a close working relationship between the vascular technicians and medical director in a community hospital. The tests can be performed on outpatients and in many instances make invasive procedures with potential complications and hospitalization unnecessary.

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QUESTIONS/ANSWERS

(Continued from page 55)

complete open exchange of information and continued effective communication, differences which have arisen, have been satisfactorily resolved by mutual agreement.

Presumably, you are optimistic the new venture will preserve the quality of care in your area and perhaps also impact favorably on the economic side. Right?

The medical community is reasonably optimistic that this new venture will succeed. Through the quality assurance programs of the IPA, we are confident that the quality of care will be preserved. Participating doctors will be part of a physician team who, as a group, will have the opportunity to identify both efficien-

cies and inefficiencies. By promoting the efficiencies and correcting the inefficiencies identified, the IPA goal will be to improve the overall quality of health care. By demonstrating quality of care and cost effectiveness, the physicians in the IPA will avoid other alternatives which may not necessarily be in the best interest of their patients. Physicians and patients alike will be free to be participating individuals, or if they elect not to be, their choice will be respected. Since the IPA pays for all outpatient care, the physician will now be reimbursed for office visits and for physical examinations of HMO enrollees. We believe the physicians will endorse this approach because it promotes wellness by encouraging preventive medicine. Eventually, the Cedar Valley Health Plan will be opened to other employers who may be interested in enrolling their employees.

Psychiatric-Mental Health Nursing: An Iowa Update

KARLENE M. KERFOOT and
KATHLEEN C. BUCKWALTER

The work of the psychiatric-mental health nurse is described by two faculty from the University of Iowa College of Nursing. They recite the history and tell of the "new role" of this member of the health care team.

PSYCHIATRIC-MENTAL health nursing has evolved from a primarily hospital based setting to such other areas as community mental health centers, marriage counseling and private practice. In Iowa, psychiatric-mental health nurses are active in developing and delivering nursing care to psychiatric patients and to people with problems in living. This article reviews the history, education, certification and practice of psychiatric-mental health nurses and presents a status report on this nursing specialty in Iowa.

HISTORY OF PSYCHIATRIC NURSING

Dorothea Dix crusaded to establish hospitals for the humane treatment of the mentally ill early in the nineteenth century. As a result of this and other influences Iowa established a state hospital system. Stephen Hemstead

addressed the Iowa Assembly on December 8, 1854:

The establishment and endowment of an Asylum for lunatics, is a measure which should commend itself to your favorable consideration. We cannot but be aware of the fact, that we have a considerable number of those unfortunate persons in our state, who have strong claims upon our sympathy and bounty, and who must be removed from their friends to other states in order to obtain the means of alleviating and improving their conditions, or of being confined in our jails and poor houses.¹

The first mental health institute at Mt. Pleasant was dedicated March 6, 1861 and the other 3 state hospitals opened after that. Initially, employees of state hospitals were untrained "cell keepers" or custodial attendants. Eventually a movement began to train attendants to work in the state hospitals and later to establish schools to train nurses to work in these state hospitals. All 4 state hospitals had training schools until their accreditation was stopped prior to 1921.² Subsequently, students in some other Iowa nursing schools affiliated with the state hospitals and spent designated amounts of time in a psychiatric nursing rotation. In 1948, the Board of Nursing mandated that all schools include psychiatric instruction and experience in their curriculum although many were already doing so.³ Psychopathic Hospital at The University of Iowa accepted its first nursing affiliation in 1921.⁴

The evolution of psychiatric-mental health nursing can be categorized into 2 phases, undergraduate and graduate nursing education. Undergraduate instruction in psychiatric nursing at first consisted of instruction in the

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care of psychiatrically ill patients in hospitals. Later psychiatric concepts were integrated into other areas of nursing.

The development of master's programs in psychiatric nursing was an outgrowth of strengthened undergraduate programs and the increasing need for nurses with specialized clinical skills and knowledge. The University of Iowa started the state's first and only graduate program in psychiatric nursing in 1962. Consultation and research in psychiatric nursing practice followed the development of graduate education. The goal of the nursing profession was to provide clinical specialization only at the master's level, with the bachelor's degree serving as a generalist degree and as a prerequisite for all advanced preparation. The following functions were identified as appropriate for psychiatric nursing:

1. Establishing relationships with patients, personnel, the public and members of the medical team.
2. Teaching
3. Supervision
4. Administration
5. Consultation
6. Research and participation in learning situations which involved investigating problems.⁵

TYPES OF EDUCATION

Registered nurses (R.N.'s) working in psychiatric-mental health settings as generalists can be graduates of 2-year associate degree programs, 3-year hospital-based diploma programs, or 4-year baccalaureate programs. A master's degree in psychiatric-mental health nursing is becoming increasingly necessary for many positions and future projections indicate doctorates (Ph.D.) will eventually be preferred for many nursing positions.

During the last 2 decades nursing education has moved increasingly from its initial hospital-based service structure to the academic institution, to culminate with the recent development of doctoral preparation for nurses. Doctoral programs have a primary goal to develop a knowledge base for the practice of nursing. In an effort to develop new knowledge unique to nursing, the educational model for nurses has changed to closely approximate that of the basic sciences. Of equal importance to the building of strong research programs in nursing is the development of sound clinical programs. This way knowledge generated by

nurse-researchers can be translated and tested in the psychiatric-mental health practice setting. There are no doctoral programs in nursing in the State of Iowa.

As a practice discipline, nursing is now considering the nature of its clinical specialization as distinct from medicine. At the present time clinical specialization in psychiatric mental health has focused on one-to-one relationships between the nurse specialist and the patient, which increasingly parallels the physician's mode of practice. As nurses increase their clinical expertise, they tend to carry their own case load not unlike independent practitioners, in both hospital and community mental health settings. In Iowa, the quality of care is believed to have been improved by introducing nurses with advanced clinical preparation into psychiatric-mental health settings.

Nurses prepared at the master's and doctoral levels have significant clinical competence. Their preparation emphasizes a view of the patient from a holistic framework that relates not only to individuals but to the systems (family, work setting, community, etc.) within which care is provided. Nurses with advanced clinical preparation have helped improve the quality of mental health services in Iowa and are prepared to assist further in this regard.

Recent educational changes in nursing have brought a movement away from the more traditional apprentice system towards one in which the nurse stands as an equal, responsible and accountable member of the mental health care team. The nurse views as his/her responsibility the care of the mental patient as an integrated whole — one whose physical, psychological and social needs all must be taken into consideration.

TYPES OF PRACTICE

Based on educational preparation there are also different psychiatric nursing levels — the generalist and the specialist. Nurses with diploma and baccalaureate degrees are prepared as generalists in psychiatric-mental health nursing and usually practice in institutional settings. Nurses with the master's degree are prepared for more advanced clinical practice and are usually called "clinical specialists." They possess advanced skills in areas such as family therapy, group therapy, and other treatment modalities.

(Please turn to page 64)

In Iowa, psychiatric-mental health nurses can be found in the psychiatric units of general hospitals, at the 4 mental health institutes, in psychiatric units of county care facilities, community mental health centers and similar institutional facilities. Clinical specialists have been practicing in community mental health centers for the past 2 decades. They continue to be in great demand because of the wide array of therapeutic skills they provide, such as medication administration, home assessments and care, patient teaching and family-centered interventions. Public health nursing agencies also hire psychiatric-mental health nurses to give direct care to patients in the community and to provide consultation. According to Iowa Mental Health Authority 1979 data, there were 4 nurses with master's degrees working in mental health centers. There were also 4 full-time and 4 part-time nurses with baccalaureate and diploma degrees.⁶

Psychiatric nurse practitioners are graduates of a special type of clinical program which provides nurses with extensive clinical skills in assessment and intervention. These nurses work in collaboration with physicians and are primary therapists for patients with discrete kinds of conditions. Nurse-practitioner programs have proved particularly valuable in states with widely distributed rural populations similar to Iowa. Presently, there are no psychiatric nurse practitioner programs available in this state, although the Iowa Mental Health Authority and The University of Iowa have been investigating the feasibility of such a program.

A select number of psychiatric-mental health nurses have established themselves in private practice in Iowa. Some specialize in the area of marriage and family counseling while others see a broader range of patients in their case load. Some nurses work in multidisciplinary group practice settings with physicians, social workers and psychologists, while others are independent.

CERTIFICATION

The American Nurses' Association has a certification process for psychiatric nurses, similar to medical specialty boards. To be certified, nurses must successfully complete an exam which tests 2 areas, indirect practice roles and direct practice roles. The indirect practice exam tests knowledge in education, administration,

supervision, consultation and research. The direct practice exam tests skill in assessment, planning, treatment and evaluation, as well as examining theoretical aspects of psychiatry. Treatment modalities such as individual, group, family and milieu therapy are examined. Questions relate to inpatient and institutional practice as well as outpatient, community and office practice. Developmental and situational problems test knowledge of young adults through the aged in emergency, acute and chronic situations. To be certified a nurse must demonstrate knowledge of at least 10 major theoretical areas, with an equal emphasis on the application of these theories to psychiatric nursing practice.

Several master's prepared psychiatric nurses in the State of Iowa have taken this clinical specialist certification exam, and many more are preparing to do so in the near future. The physician who employs or works with a psychiatric nurse who has successfully completed this exam can be certain of his/her ability to provide counseling, psychotherapy, crisis intervention and patient education in a variety of treatment settings, from several theoretical perspectives, utilizing multiple treatment approaches. There are states moving toward certification as a prerequisite for third party payment for nursing services, although this is not yet the case in Iowa.

Psychiatric-mental health nursing in Iowa has evolved from a custodial form of practice into one that now utilizes sophisticated theory and research on which to base the practice of nursing. In Iowa, psychiatric-mental health nurses are increasingly recognized for their contributions. Unfortunately, the demand for nurses far exceeds the present supply and there are many unfilled positions. Psychiatric mental health nursing is unique in that it combines concepts from psycho-social and biophysical theory into an integrated practice of nursing.

ACKNOWLEDGMENTS

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REFRESHER COURSE FOR THE FAMILY PHYSICIAN March 9-12

THE 1982 REFRESHER COURSE for the Family Physician will occur in Iowa City March 9-12 under sponsorship of the University of Iowa College of Medicine Office of Continuing Medical Education and the Department of Family Practice and the Iowa Academy of Family Physicians.

The FP course is accredited for 27 hours by the American Academy of Family Physicians and for the same amount of Category I credit toward the AMA Physicians' Recognition Award. The University of Iowa awards 2.7 continuing education units for the full program. Additional information is available from the Office of Continuing Medical Education, U. of I. College of Medicine, Iowa City, Iowa 52242. Telephone 319/353-5763.

The 1982 Refresher Course will give family physicians a stimulating and practice-oriented look at what is new in medical thinking, and a chance to brush up on what is old. Practical applications will be emphasized. Brief lectures, panels, small-group discussions and workshops, question and answer periods, lunches with the experts, printed course syllabuses, self-assessment quizzes, basic CPR certification — all of these will be available in a fast-moving and useful educational program.

Unless you are currently certified in basic cardiopulmonary resuscitation, registrants are urged to become certified while attending the course.

The opportunity to have a complete physical examination will be repeated again this year. Advance notice of appointments will be mailed to the participants.

Among the 1982 program topics are — *What You Should Know About Reyes' Syndrome, Dizziness in the Elderly — or in Anybody, Medical Consequences of Nuclear War, New Drugs Replacing Old, Early Detection of Colorectal and Other Cancers, Bedwetting, What Should Guide the Choice of a Birth Control Pill, Does Cimetidine Deserve to be the Most Prescribed Drug?, Review of New Cardiac Drugs, Determining Disability, Using Small Computers in the Office, Care of Common Hand Injuries, Coping With Unexpected Obstetrical Complications, Update on Renal Medicine, The Family Physician's Role in Giving Chemotherapy, and Farm Health Hazards.*

The Refresher Course is accredited for 27 hours by the American Academy of Family Physicians and for the same amount of Category I credit toward the AMA Physicians' Recognition Award.

A special program will be offered this year for physician spouses who are nurses and who may wish some accredited nursing education. The University of Iowa will award 0.6 continuing education unit to nurses for the program on March 9 entitled, "First Year of Life: A Time to Wonder," and 0.3 CE unit for the two programs on March 11, "Hidden Alcoholic: Recognition and Effective Treatment," and "Anorexia Nervosa."

Registrants' spouses are cordially invited to attend all programs. The FP Refresher Course begins at 8:15 a.m. on Tuesday, March 9, and continues until adjournment at 3 p.m. on Friday, March 12.

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COMMENTING EDITORIALLY

MARION E. ALBERTS, M.D.
SCIENTIFIC EDITOR

LOVE

*Oh, if it be to choose and call thee mine,
Love, thou art every day my Valentine.*

—THOMAS HOOD

IT IS APPROPRIATE for Valentine's Day to be in February. The miseries of cold winds, ice and snow, colds and coughs, and the desire for green grass and fragrant flowers reach a peak in February. Love springs forth on this occasion, and it is fitting to express our thoughts and feelings for those of whom we are fond.

Love is a word denoting a feeling of deep affection. One of my pet peeves is the application of this special word to an inanimate object. To me to "love" an article of clothing, or an object of art, is a malapropism. We may like such an item, but love is special, a feeling of affection, however that feeling may be rendered.

My older readers will recall the lacy valentines; yes, even the comic ones of yesteryears. You senior colleagues will recall also the "memory books" that we used to express spe-

cial thoughts to our friends. Some of the entries were, of course, childish, silly and frivolous; yet, often there was true sentiment of a loving nature. Some entries were downright mushy. Remember "Roses are red. Violets are blue. Sugar is sweet, and so are you"? Those memory books served a distinct purpose in our lives. We could express ourselves in a way that perhaps would be less embarrassing at the moment.

The memories of those little books is immense. I still have one that takes my memories back to the mid-thirties when I was in grade school. That little loose-leaf book with multi-colored pages has numerous short sentimental passages that help recall persons who otherwise might be forgotten; some are no longer living, and some are still in contact to share a smile or laugh over the writings of our youth. Some of the entries were indeed silly or frivolous, but memories of good things and times remain. Some entries are by former grade school teachers who played great roles in guiding my destiny; some entries are by persons whom I no longer recall. Surely the most precious entry is on the last page:

*I glance these pages o'er and o'er
To see what others have written before;
And on this quiet spot I will simply write —
Forget me not.*

— MOTHER

There is much room in this world for love. February 14 reminds us to express our love to each other, and especially to the ones most dear. Candies, flowers, or fancy greeting cards are nice, but not always necessary. Valentine's Day is special. Three little words may be more significant than the material things. Use them. I will. *I love you.* — M.E.A.

RECENT BOOKS

THE DOCTOR'S CASE AGAINST THE PILL, 1980, by Barbara Seaman. Doubleday & Co. Inc., New York. Price, \$6.50.

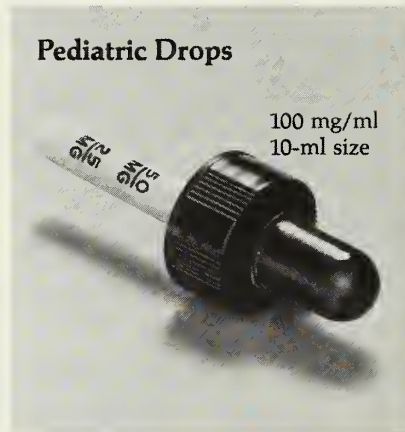
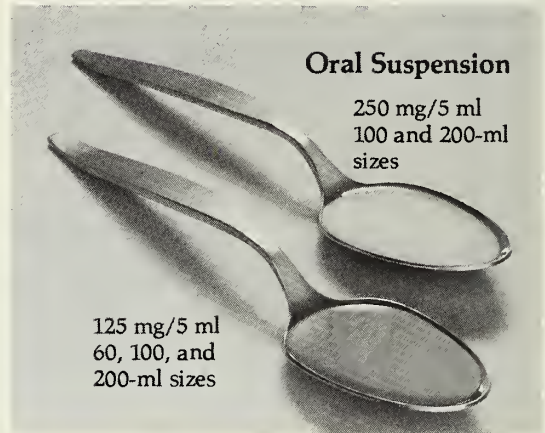
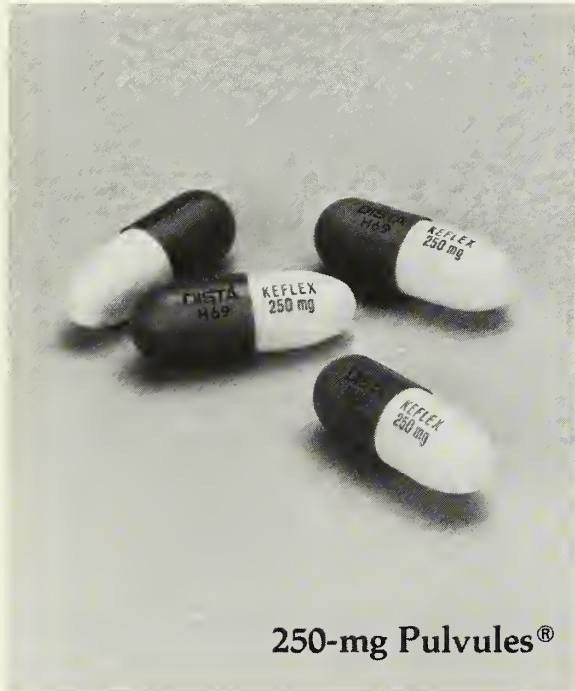
MESMERISM: A TRANSLATION OF THE ORIGINAL MEDICAL AND SCIENTIFIC WRITINGS OF F. A. MESMER, by George J. Block. William Kaufmann, Inc., Los Altos, California. Price, \$10.00.

THE HUMAN PATIENT, 1980, by Naomi Remen. Anchor Press/Doubleday & Co. Inc., New York. Price. \$10.95.

PRISONERS OF PAIN, 1980, by Arthur Janor. Anchor Press/Doubleday & Co. Inc., New York. Price, \$11.95.

SEX BY PRESCRIPTION, 1980, by Thomas Szasz. Doubleday & Co. Inc., New York. Price, \$10.95.

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OUR MAN ON EDUCATION

RICHARD M. CAPLAN, M.D.

CELESTIAL AND EDUCATIONAL VOIDS

TWO ITEMS CROSSED my threshold today, totally independent events but remarkably related. The first was a compilation of aphorisms assembled by Dr. David Youel, director of CME for the University of Michigan, who gave them to attendees at a CME conference sponsored by the AMA. From that list these two struck my fancy: 1) "Knowledge is like the universe: mostly nothing, with a few widely scattered islands of matter and energy"; and 2) " $E = mc^2$. It takes an immense amount of energy to produce one bit that matters. But one bit that matters can release an awesome explosion of energy."

The second item was a newspaper account of the discovery by astronomers at three major observatories that there exists "out there" (where they keep looking) an immense void so large it would make up about one percent of the observable universe. There seems to be a huge "hole" in space, about 300 million light years wide, in which the average density of material seems to be only one-tenth that of the universe as a whole. The astronomers are puzzled and vexed by the finding and are even supposing that it throws into question the current beliefs about the origin of the universe. Well, that's how it is with lots of cherished beliefs. Maybe if those astronomers had been

spending part of their time in the world of CME they might not have felt so amazed and rattled by their finding. For, to one who keeps peering hard into it, the world of educational "space" often seems to involve an immense amount of void, a nothingness dotted only here and there with a concretion of substance otherwise known as a "pearl." I puzzle at two things: 1) that only now did those astronomers discover such an immense hole — after all, 1% of the universe is not exactly a trifle, and 2) that some CME zealots speak as if CME ought to pay off so richly that one might as readily walk across educational space on a constant stream of new learning as step across a Colorado trout stream on the exposed rocks.

... to one who keeps peering hard into it, the world of educational "space" often seems to involve an immense amount of void, a nothingness dotted only here and there with a concretion of substance otherwise known as a "pearl."

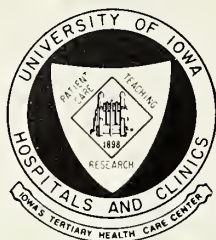
What answer can there be for either of these puzzlements? I conjecture it has to do with the measuring instruments. In spite of the marvels of modern astronomy, only now have the instruments and techniques appeared to make it possible to discover even so massive a void in the firmament. And similarly, we have yet to develop tools of educational measurement so accurate and efficient that they can regularly and easily measure the causes and effects of educational efforts. Galileo was probably pretty excited at finding four moons around Jupiter. And it was only in 1929 that Pluto was found to be the outermost planet of our solar system. "Outermost?" — it is to laugh!

The human eye is a marvellous instrument, yet it detects electromagnetic waves only if they lie in the region of 400-700 nm — splendid, but operative in an exceedingly narrow range. Maybe new instruments will one day permit the astronomers to realize there's something more in that void than they thought. Likewise, I predict we will gradually develop and accept new measures for assessing the value of our prodigious effort in CME.

And what about $E = mc^2$? Well, everybody knows how true that is.

Dr. Caplan is Associate Dean for Continuing Medical Education at The University of Iowa College of Medicine.

DRUG THERAPY REVIEW



UNIVERSITY OF IOWA HOSPITALS AND CLINICS

REYNOLD SPECTOR, M.D., Editor

THE RATIONAL USE OF LITHIUM

SINCE ITS RELEASE in 1970, lithium carbonate has been utilized extensively, not only in the treatment of manic episodes, but for a variety of other psychiatric and medical disorders as well. However, diverse side effects and potentially serious toxicity may accompany lithium administration. Consequently, the rational use of lithium requires a working knowledge of its pharmacology, clinical indications, dosage, side effects and toxicity.

PHARMACOLOGY

Lithium is rapidly and completely absorbed from the gastrointestinal tract, attaining peak serum levels in 1 to 3 hours. It is not protein bound and is widely distributed throughout the body, although at nonuniform rates and along different concentration gradients. A serum-tissue steady state is achieved after several days.

Lithium is excreted almost entirely by the kidneys and has a half-life of elimination of 24 hours. Approximately 75% of filtered lithium is reabsorbed by the proximal tubule and loop of

Henle in much the same way as sodium. Consequently, ingestion of a large quantity of salt increases renal sodium and lithium excretion and may necessitate an increase in lithium dose in order to maintain therapeutic levels. Conversely, any stimulus of proximal sodium reabsorption, such as dietary restriction, dehydration, or edematous disorders, will produce lithium retention and an increased serum lithium level. Consistent with these findings is the evidence that thiazide diuretics, by inhibiting distal sodium reabsorption and, after volume contraction, stimulating proximal sodium and lithium reabsorption, may increase serum lithium levels 25-60%.¹ Furosemide, however, does not appear to significantly affect lithium excretion. The proximal reabsorption of lithium stimulated by the sodium-depleting action of furosemide is counterbalanced by its blockage of lithium reabsorption in the loop of Henle. Thus, the use of furosemide may not require modification of the lithium dose.²

CLINICAL INDICATIONS FOR USE

The effectiveness of lithium in the treatment of manic episodes has been demonstrated in a number of controlled trials. Longitudinal studies have confirmed its efficacy in preventing recurrence of the manic phase of bipolar disorders and have strongly suggested a prophylactic effect against the depressive phase. In addition, limited trials have shown a possible effectiveness of lithium in the treatment and prophylaxis of unipolar depression. Other conditions in which lithium therapy may possibly be useful include cluster headaches, hyperthyroidism, neutropenia associated with either chemotherapy or Felty's syndrome, chronic alcoholism and impulsive aggression.

DOSAGE

Before initiating lithium therapy, an evaluation of the patient, including thorough neurologic examination, serum electrolytes and creatinine, urinalysis, thyroid function studies, and electrocardiogram should be obtained. This baseline information is necessary for the assessment of possible future side effects.

The usual starting dose of lithium carbonate for acute mania is 1200 to 1800 mg per day, but the dose must be individualized. The serum lithium level obtained 24 hours after a single

This information for Iowa physicians is furnished and sponsored by the University of Iowa Hospitals and Clinics.

600 mg dose may be predictive of the individual's dosage requirement.³ Lithium must be given in divided doses to avoid side effects associated with transiently high serum levels.

Initially, serum lithium levels should be obtained 2 to 3 times a week. Once therapeutic serum levels have consistently been achieved, the interval between measurements can then be gradually extended to several months. Although opinions differ, therapeutic levels are usually considered to be 0.6 to 1.4 mEq/l. These values are for the standardized serum lithium level, which is drawn 12 hours after the last dose.

SIDE EFFECTS AND TOXICITY

The most common neurologic side effect of lithium is a fine tremor, which occurs in over 50% of patients. Incidence of the tremor usually decreases with time during maintenance lithium therapy. Lightheadedness, muscular weakness, rigidity and impaired concentration and memory are other neurologic side effects which are usually transient or mild. Manifestations of lithium neurotoxicity include the following: lethargy, confusion, hallucinations, dysarthria, ataxia, nystagmus, choreoathetosis, paralysis and abnormal reflexes.⁴ In cases of severe toxicity, convulsions, coma and death may follow.

Impaired renal concentrating capacity, manifested by polyuria with secondary polydipsia, occurs in 10 to 40% of lithium-treated patients. This effect appears to be due to a variable degree of nephrogenic diabetes insipidus, since lithium has been shown to interfere with the anti-diuretic hormone activation of adenyl cyclase in the distal tubule and collecting duct.⁵ While usually reversible, the impairment in concentrating capacity may persist for longer than 12 months after lithium is discontinued.

In the past several years, renal biopsy studies have revealed evidence of nephron atrophy, interstitial fibrosis, and sclerotic glomeruli in patients on long-term lithium therapy. In addition, case reports of interstitial nephritis and azotemia associated with lithium therapy have recently appeared.⁶ However, there has been no evidence in longitudinal studies that 10 to 15 years of continuous lithium treatment leads to a progressive decline in glomerular function.⁷

Clinical hypothyroidism occurs in approximately 3% of patients on lithium, although the prevalence of an elevated thyroid-stimulating

hormone may be 10 to 20%. Additional endocrinologic side effects of lithium include mild hyperparathyroidism, weight gain, and a possible insulinlike effect. However, decreased glucose tolerance has also been reported in patients receiving lithium.

Although lithium is frequently considered to be contraindicated in patients with cardiac disease, there is actually little data to support this claim. Concern regarding the possible cardiotoxicity of lithium arose when, following its uncontrolled use as a salt substitute in the 1940s, a number of fatal cases of lithium toxicity occurred. In some of these patients, the terminal phases of coma were complicated by hypotension and arrhythmias. Subsequent studies, however, have shown only that lithium produces a reversible T-wave depression on the electrocardiogram. There is also equivocal evidence of lithium-induced increased frequency of premature ventricular contractions in certain individuals, and there have been 12 case reports of sinus node dysfunction associated with lithium therapy. Consequently, there appears to be inadequate data to contraindicate the use of lithium in patients with cardiac disease. However, it should be remembered that these patients may be at increased risk of lithium toxicity because of the concomitant use of diuretics or salt restriction. In addition, patients with preexisting ventricular arrhythmias or sinus node dysfunction should be followed closely.⁸

Additional side effects of lithium may include nausea, vomiting, diarrhea, a reversible granulocytosis and exacerbation of psoriasis. Animal studies have shown lithium to be teratogenic in several species, and it may be teratogenic in humans. An increased incidence of Ebstein's anomaly has been reported in the children of lithium-using mothers.⁹ Consequently, lithium use should be avoided during the first trimester of pregnancy.

MANAGEMENT OF TOXICITY

Lithium toxicity is frequently heralded by gastrointestinal symptoms followed by apathy, drowsiness and the other neurologic manifestations previously listed. Toxicity is usually associated with lithium levels of greater than 1.5 to 2.0 mEq/l, and it appears that the severity of lithium poisoning correlates with both the magnitude and duration of the ele-

(Please turn to page 74)

STATE DEPARTMENT/ PUBLIC HEALTH

WORKSITE INTERVENTION PROGRAM

FOR THE PAST 9 months, Iowa State Health Department employees have served as guinea pigs for Iowa's Health Awareness Program (IHAP). During this time, 78% or 188 of the 240 Health Department employees have bled, sweat, and polished the soles of their shoes in search of "wellness." The program enjoyed the support of the Governor and the Commissioner of Health and has provided a means to refine and upgrade our approach to other agencies.

While the program's approach and content are still evolving, the basic, long-term objectives are:

1. *A commitment by employees to change or moderate lifestyles,*
2. *A commitment by families and friends of employees to change or modify their lifestyles,*
3. *A significant gain in "lifestyle points" as determined by our Lifestyle Profile Test.*

Likewise, our short-term objectives are:

1. *Identifying employees who are hidden hypertensives,*
2. *Identifying employees in need of dietary changes to lower their cholesterol and triglyceride levels, and*
3. *Identifying employees in need of participation in physical exercise.*

While these goals are short and simple, they

This information on public health matters is furnished and sponsored by the Iowa State Department of Health.

also appear achievable. At this time the only program currently in operation is in the State Health Department. However, 1,200 employees of the Department of Transportation and 400 employees of the Department of Revenue will begin an intervention program. Our goal is to add 2 additional agencies every 6 months, until the entire state government is involved.

The program has 4 phases:

Phase I is the Introduction. This starts with obtaining the cooperation of the head of the agency and the establishment of a working committee within the agency to coordinate activities. The program is then introduced to the employees through the agency's newsletters, posters, pay check inserts, etc. The concept and objectives of the program are indicated and the opportunity is given to participate in an agency-wide confidential Attitude and Prevalence Survey. This survey establishes baseline data for the agency in the 6 health-risk areas: nutrition, physical fitness, stress, hypertension, smoking and alcohol, and (more important for the program) to stimulate employee interest in joining the program. Survey results are key-punched by the agency, fed into the Health Department's computer and published. An IHAP booklet, personalized with the individual's test information, is provided to each employee.

The second phase is a medical/physical assessment of interested employees. The tests are performed by personnel from the State Health Department and a local hospital. A nominal charge is made to employees for the blood work and the analysis. The results are provided to the employees which they enter in their IHAP book.

The tests conducted are: 1) blood pressure, 2) resting pulse, 3) skinfold, 4) flexibility, 5) the Kasch step test, and 6) 3 blood tests; cholesterol, triglycerides, HDL levels.

Employees found "at risk" are referred to their physician for further medical follow-up. Repeat testing is offered monthly at no charge for employees with high blood pressure and in 6 months for those with elevated blood lipid levels.

The third phase is the intervention or educational phase and proceeds naturally from the medical/physical assessment. However, before going into detail about the educational

program, I should mention that in Iowa, the state program has 3 constraints placed on it.

1. *The program must be entirely voluntary and only peer pressure may be applied to encourage joining.*

2. *No work time may be used for conducting the program. The employees receive two breaks, which are 15 minutes each, and a lunch period of 30 minutes. Most employees are unable to arrive early or stay late on a regular basis. As an accomodation to the program, management has allowed attendees of our Lunch and Learns to give up one break and extend their lunch time to 45 minutes.*

3. *Facilities are limited (one shower in the entire complex) to nonexistent. With the exception of connecting tunnels between the 5 state buildings there are no indoor facilities available for exercise.*

4. *No department funds are available for any extracurricular activity.*

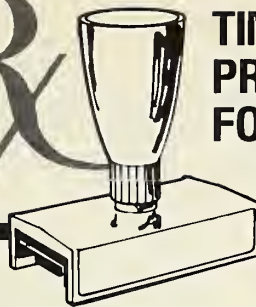
The first session of the Educational/Intervention Program is a Lunch and Learn session. This consists of an explanation of the employees' test results, especially the blood tests, by a hospital professional. Following the explanation of test scores, additional Lunch and Learns are conducted covering each of the six high-risk areas and based on the activity interests shown on the survey. A prime component of the Lunch and Learns sessions is a pre- and post-skills and knowledge test taken by every participant. As each new activity session is started, intervention support groups are formed in areas in which employees show an interest. The groups are designed to bring together employees with similar problems, interests and goals.

At this point in our program, between 50 and 60 employees remain active in one or more of the support groups. The most popular has been the walking/weight loss group which has been divided into 3 competing teams. In 2 months, the 3 groups have accumulated over 500 miles during breaks and lunch time. (They have, however, only lost a total of 46 lbs.) As a warning, some have even gained weight! Other successful groups have involved weight control, flexibility and hypertension. The biking group has suffered from two handicaps: weather in winter and safe storage for cycles in summer.

Each person who enters a support group signs a contract with the group, setting reasonable achievement goals.

The fourth and final phase of the program is

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evaluating both the program and the individual. All participants are asked to take a second Attitudinal and Prevalence Test 9 months after taking the first test. Persons at risk for high cholesterol are retested in 4 months and persons with high blood pressure every 2 weeks. The results are confidential to the participant and statistics are gathered on the overall results. Certain positive results are already evident. Of 133 persons receiving the blood test, 34 were discovered to be borderline or "at risk." After retesting, 14 persons were identified as "at risk" and are currently in the program under a physician's care. Had their problems remained undetected, statistically at least one-half could expect serious problems. Not only would this represent a loss of an experienced employee, but the "out-of-pocket" costs in health insurance, sick leave, hospitalizations, etc. would have expended, in one day, the entire cost of the intervention program to the State Health Department to date. For further information about IHAP, call 515/281-6779 at the Iowa State Department of Health.

December 1981 Morbidity Report

Disease	Dec. 1981 Total	1981 to Date	1980 to Date	Most Dec. Cases Reported From These Counties
Amebiasis	5	24	10	Polk, Boone, Colhoun
Brucellosis	0	7	9	
Chickenpox	802	8651	9360	Linn, Dubuque, Bueno Visto
Cytomegalovirus	0	29	27	
Eaton's Agent infection	18	62	20	Polk, Dubuque, Linn
Encephalitis, virol	4	35	37	Mohosko, Allomokee, Mitchell
Erythema infectiosum	37	1206	449	Polk, Wapello
Gastroenteritis (GIV)	2479	18299	20537	Linn, Polk, Pottawattomie
Giardiasis	14	141	47	Lyon, Linn, Johnson
Hepatitis, A	14	217	214	Keokuk, Polk
Hepatitis, B	10	94	105	Polk, Johnson, Scott
type unspecified	5	59	77	Decatur, Boone
Herpes Simplex	15	250	117	Johnson, Linn
Herpes Zoster	0	8	3	
Histoplasmosis	2	17	28	Black Hawk, Woodbury
Infectious mononucleosis	20	299	379	Black Hawk, Linn
Influenza, lab confirmed	0	191	110	
Influenza-like illness (URI)	5872	65559	64554	Linn, Pottawattomie, Shelby
Meningitis				
oseptic	3	74	75	Polk
bacterial	25	143	125	Scott, Polk, Linn
meningococcol	1	27	16	Corroll
Mumps	24	94	62	Linn, Black Hawk, Des Moines
Pertussis	2	9	2	Delaware
Robies in animals	64	889	530	Story, Clinton, Hordin
Rheumatic fever	1	10	1	Keokuk
Rubello (German measles)	1	5	9	Davis
Measles	0	1	20	
Salmonellosis	26	276	184	Bremer, Des Moines, Dubuque
Shigellasis	5	40	56	Polk, Delaware, Woodbury
Tuberculosis				
total ill	8	88	90	Polk, Linn
bact. pos.	6	59	65	Polk, Linn
Venereal diseases:				
Gonorrhea	449	5283	5065	Polk, Black Hawk, Scott
Syphilis	14	38	34	Polk, Clay, Union

Laboratory Virus Diagnosis Without Specified Clinical Syndrome: Adenovirus — 2, Howard, 1, Lee, 1, Polk, 1, Winneshiek; Guillain Barre — 1, Manana, 1, Washington; Legionnaire's Disease — 1, Benton, 1, Cerro Gorda, 3, Johnson, 1, Marshall, 1, Scott, 1, Story, 1, Von Buren; Reye Syndrome — 1, Delaware; Leptospirosis — 1, Muscatine; Cocksackie — 1, Dubuque; Malaria — 1, Linn; Compylabacter — 1, Black Hawk, 1, Clinton, 1, Delaware, 1, Dubuque, 1, Jasper, 1, Johnson, 14, Linn, 3, Marshall, 11, Polk, 1, Sioux, 1, Toma, 1, Webster, 2, Woodbury; Toxic Shock Syndrome — 1, Palk, 1, Pottawattomie, 2, Scott; Tularemia — 1, Pottawattomie.

DRUG THERAPY REVIEW

(Continued from page 71)

vated serum concentration. There is, however, a wide range of individual tolerance, and toxicity has been reported with standardized 12-hour lithium levels in the therapeutic range. Consequently, when making therapeutic decisions in cases of lithium toxicity, it is important to consider not only the serum level but also the neurologic status of the patient.

Treatment of toxicity is usually instituted with saline infusion, although an increase in lithium excretion may not result. Treatment with hemodialysis should be considered if the standardized serum lithium level is above 2.5 mEq/l, or if the patient has significant neurologic signs or symptoms.¹⁰

Most patients recover from lithium poisoning, but death or persistent neurologic or renal dysfunction is not uncommon.

CONCLUSION

There are multiple adverse effects of lithium, and lithium toxicity may be life threatening. Consequently, lithium should be used only when a significant likelihood of therapeutic efficacy exists. Morbidity due to lithium can be minimized through the judicious use of serum levels and careful monitoring for evidence of adverse effects. — David A. Lewis, M.D., Resident in Internal Medicine and Psychiatry.

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ABOUT IOWA PHYSICIANS

Dr. Cecil W. Seibert, Waterloo, was honored at a recent surprise 75th birthday party. Dr. Vernon Plager, Waterloo, was master of ceremonies. Dr. Seibert was president of the Iowa Medical Society in 1969. He is a past president of the Black Hawk County Medical Society; a founding fellow of the American College of Obstetricians and Gynecologists; a past president of the Iowa Division of the Society of Obstetricians and Gynecologists; and a past president of the Iowa Division of the American Cancer Society, in addition to many other medical leadership responsibilities. He has practiced in Waterloo since 1937. . . . Dr. J. H. Sunderbruch, Davenport, recently received the papal Order of Knight of St. Gregory. The honor was conferred on Dr. Sunderbruch at a special mass at St. Mary's Church. The Order of St. Gregory was founded in 1834 by Pope Gregory XVI to honor outstanding Catholics. Dr. Sunderbruch has served on the Assumption High School board of education since 1968. He chaired the 1979 fund drive and is co-chairman of the current Commitment to Excellence drive. He started the Assumption Foundation and is co-founder of the Sunderbruch-O'Donnell Scholarship Fund. Dr. Sunderbruch has been team physician for Assumption — and its predecessor — St. Ambrose Academy — for over 40 years. He has also served as team physician for St. Ambrose College. He was president of the Iowa Medical Society in 1971. He has practiced in Davenport since 1934. . . . Dr. Phil Bryant will join Dr. Richard Myers and Dr. John Mochal at Medical Associates in Independence in July. Dr. Bryant currently is completing his family practice residency at Iowa Lutheran Hospital in Des Moines.

Dr. L. E. DeLucca, Fort Dodge, was guest speaker at a recent meeting of the Wright

County Medical Society. Dr. DeLucca spoke on various otolaryngology techniques and procedures. . . . New officers of the Iowa Society of Allergy and Immunology are **Dr. Dennis W. Rajtora**, Dubuque, president; **Dr. W. James Metzger**, Iowa City, vice-president; and **Dr. John K. Kammermeyer**, Iowa City, secretary-treasurer. . . . **Dr. Clarence H. Denser, Jr.**, Des Moines, has been named president of the American Pathology Foundation. Dr. Denser is chairman of the IMS Committee on Legislation.

Dr. Craig Bainbridge and **Dr. Larry Foster**, Sioux City physicians, participated in a recent workshop on "Thermal Injuries," at St. Luke's Medical Center in Sioux City. . . . **Dr. A. J. Gantz**, Greenfield, was honored recently by the local Chamber of Commerce for longtime service to the Greenfield Community Development Corporation. . . . **Dr. Edward Mason**, professor, Department of Surgery, U. of I. College of Medicine, has been named acting head of the department. . . . **Dr. Vasu Arora** recently began medical practice in Garwin. Dr.

Arora has been associated with the Iowa Veteran's Home in Marshalltown. . . . **Dr. Henry Corn**, retired Des Moines pediatrician, recently was honored at a reception at Tifereth Israel Synagogue. The special tribute to Dr. Corn coincided with his 70th birthday. Many "second generation" patients attended the event.

Dr. Gerhard T. Schmunk has been elected president of the Clinton County Medical Society; **Dr. John O'Shea**, vice president; and **Dr. Preeti Bhatia**, secretary-treasurer. All are Clinton physicians. . . . **Dr. Eduardo Reveiz** has been named president of the medical staff at Hamilton County Hospital, **Dr. K. Y. Lee**, vice president; and **Dr. J. X. Latella**, secretary-treasurer. . . . **Dr. Mark E. Stelzer** will join **Dr. E. B. Grossman** in the practice of surgery in Orange City in July. Dr. Stelzer received the M.D. degree at the University of Nebraska School of Medicine and is currently competing his surgery residency in Columbus, Ohio. . . . **Dr. Lowell A. Luhman** is new president of the medical staff at Mercy Hospital in Iowa City.



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Dr. Luhman is a past president of the Johnson County Medical Society. Other officers include — **Dr. James Gardner**, president-elect; **Drs. James Baumann, J. C. Brown, and Kenneth Judiesch**, at-large members of the executive committee. All are Iowa City physicians. . . . **Dr. Garold L. Moyer**, Keokuk, is the author of a paper entitled, "Control of Hypertension in a Family Practice Model Office," published in the December, 1981 issue of the JOURNAL OF FAMILY PRACTICE. Dr. Moyer wrote the paper while serving his family practice residency at the U. of I. College of Medicine. The paper was originally presented before the North American Primary Care Research Group at Incline Village, Nevada.

Dr. Robert T. Melgaard, Dubuque, has been elected to the board of trustees of the American Group Practice Association. Dr. Melgaard will serve a 3-year term on the 9-physician board which is the policy-making body and council for the association. . . . **Dr. James Blessman**, Des Moines, recently presented a workshop on "Management of Chronic Pain" for nursing

personnel at Cass County Memorial Hospital in Atlantic. Dr. Blessman is medical director of the pain center at Northwest Hospital in Des Moines. . . . **Dr. Richard L. Carruthers**, Davenport, has been appointed to a 3-year term on the Iowa Board of Medical Examiners by Governor Robert Ray. Dr. Carruthers is the current president of the Scott County Society of Osteopathic Physicians and Surgeons.

DEATHS

Dr. Roland T. Rohwer, 79, longtime Sioux city physician, died December 12 at a Sioux City hospital. Dr. Rohwer received the M.D. degree at Creighton University School of Medicine; interned at St. Joseph Hospital in Omaha, Nebraska, and served a 2-year fellowship at the Mayo Clinic in Rochester, Minnesota. He began medical practice in Sioux City in 1937, retiring in 1978. Dr. Rohwer was a life member of the Iowa Medical Society.



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have M.D. degree, be eligible for Iowa licensure, and have several years of practice experience. Duties include teaching residents patient care, including obstetrics, and also providing patient care. Other duties include program administration and assisting in research. Salary range — \$60,000 per year — with an additional 20% fringe benefit package. Other fringe benefits relating to retirement, moving expenses, and continuing education provided. Please submit your resume to: Charles A. Waterbury, M.D., Program Director, Black Hawk Area Medical Education Foundation, 441 East San Marnan Drive, Waterloo, Iowa 50702. 319/234-4419. Equal Opportunity Employer.

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In The Public Interest



Iowa Medicine — His Life's Cause

WHEN YOU HEAR the words *doctor, electrician, pilot, policeman, etc.*, you rather easily visualize the respective duties which are involved. But when you hear someone described as an *association executive* some uncertainty may settle in your mind. What's an *association executive*?

This individual must be diversified in his capabilities. He needs to be an administrator, a communicator, an innovator, etc., etc. In other words, to be effective, he has to be a sort of *rare bird*.

DONALD L. TAYLOR

Donald L. Taylor died January 11, 1982 at his home in Fallbrook, California. His funeral was January 15 in Des Moines. The words here first appeared as the July, 1975 *In The Public Interest*. That was just after Don retired from the IMS. He appreciated these comments at that time; they seem appropriate to repeat. A noteworthy fact not cited here was Don's 1978 election as the first and only honorary member of the Iowa Medical Society. — *The Editors*



One such *rare bird* has served the Iowa Medical Society for nearly 30 years. In this time interval, Donald L. Taylor has come to be recognized as one of the nation's most able medical association executives. In support of this declaration is his service as a president of the American Association of Medical Society Executives.

On June 1, 1975, Mr. Taylor retired as executive vice-president of the Iowa Medical Society. He has served in this capacity since 1953. While he makes this move for health reasons, he will continue his service to and employment with the Society as an executive advisor.

As chief administrative officer for the professional organization of Iowa physicians, Mr. Taylor has had the unique distinction of knowing and working for more medical doctors in the state than perhaps any other lay person. His performance has been praised by many of his physician employers and is possibly best capsulized by wording on the John F. Sanford Award which was presented to Mr. Taylor in 1964. It reads:

"... to Donald L. Taylor whose significant achievements on their behalf and whose dedication to their ideals and aspirations is gratefully acknowledged by his warm friends — the physicians of Iowa."

Mr. Taylor has served with distinction in numerous capacities related to his primary assignment as IMS executive vice-president. He has been EVP of the four-year-old Iowa Foundation for Medical Care. In addition, he has been (and will continue to be) secretary-treasurer of the Scanlon Medical Foundation/Iowa Medical Society. He has served as secretary-treasurer of the Iowa Health Council. He is a past-president of the Iowa Society of Association Executives and is a Chartered Association Executive (CAE) of the American Society of Association Executives.

Looking to the future, Mr. Taylor will become president of the Professional Convention Management Association in 1976. He is now first vice-president. PCMA is the national organization which represents all of the legitimate health professions in planning effective medical meetings.

Obviously, the delivery of medical care has progressed dramatically during Mr. Taylor's 30 years of service. For example, in this time frame, Blue Cross/Blue Shield has emerged in Iowa as a positive health care financing mechanism. Significant administrative leadership has been given to this process by Mr. Taylor. The growth of Iowa's medical education capability has been similarly impressive — carrying in the process the support of the Iowa Medical Society. The active pursuit of good medical legislation has also had a priority classification over the past three decades.

In these areas — and in all Medical Society endeavor — the routine has involved (1) policy-making by the IMS House of Delegates and/or Executive Council, and (2) strategy development and execution by the Board of Trustees and various Society committees — with ongoing administrative support provided under the conscientious direction of Mr. Taylor.

February 1982

Journal of the Iowa Medical Society



QUESTIONS - ANSWERS

DOUGLAS B. DORNER, M.D.
Des Moines, Iowa



1982 IMS SCIENTIFIC SESSION

Dr. Dorner is chairman of the Program Committee for the 1982 Scientific Session. He is in the private practice of vascular surgery in Des Moines. He comments here on the upcoming meeting in Iowa City. The full program appears in this issue of the JOURNAL.

Would you like to invite Iowa physicians to the 1982 IMS Scientific Session?

I certainly would like to invite all Iowa physicians and their spouses to the 1982 IMS Scientific Session which will be held at the Highlander Inn and University Hospitals in Iowa City on April 6, 7 and 8.

How would you characterize the 1982 program — something for everybody?

The Program Committee has worked hard toward the goal of having the session provide something for everyone. Our charge was to produce a program geared to the practicing physician, and the general topics of interest were chosen with this in mind. Additionally, we have arranged for concurrent sessions where the attending physician will have his choice of four different subject areas. These concurrent sessions will be available on two different days of the meeting.

Are there any sessions you would like to particularly emphasize?

You will note that I included spouses in my invitation. The opening session on Tuesday afternoon has been specifically directed to-

ward two areas of mutual interest to Iowa physicians and their spouses; namely, nutrition and stress management. We will be looking (among other areas) at fad diets and the psychology of obesity during the nutrition session, and the stress management session that same opening afternoon features Herbert C. Modlin, M.D., from the Menninger Foundation.

Another session of special interest will be on the final day when we address the overwhelming question of health care costs. We will hear the views of Melvin Henderson, Ph.D., chairman, Governor's Commission on Health Care Costs; Robert Burnett, president, Meredith Corporation, to address industry's concern and involvement; and John S. Zapp, D.D.S., to give a federal perspective as director of the Washington office of the American Medical Association.

In a similar vein, the Honorable James Leach, U.S. Representative for the First Iowa Congressional District, will speak at the Wednesday evening banquet.

One final new feature of this year's meeting will be the opportunity for an attending physician to share a box lunch with selected faculty from virtually all of the University departments during the luncheon break on Wednesday, April 7. We feel this will afford an informal opportunity on a more personal basis to seek answers to specific problems.

There are CME meetings all over the country and world. What commends the IMS meeting to Iowa physicians?

I am personally excited about this Scientific Session in Iowa City and would commend it to all Iowa physicians because it affords a unique opportunity to visit with colleagues from around the state, to enjoy both inter- and interdisciplinary presentations, and to attend programs which may be of mutual interest to physicians and their spouses. The convenience of the meeting in Iowa City and the cost factors also should not be overlooked.

So, Iowa City is the place to be from April 6-8, right?

It certainly is. We have drawn an outstanding faculty from both within the state and from outside of Iowa, and from both the academic and the private sectors.

THINGS YOU SHOULD KNOW

1982 SCIENTIFIC SESSION

Full program for the 1982 IMS Scientific Session of the Iowa Medical Society appears in this issue as does a personal invitation from the Program Committee Chairman (Questions/Answers). This is a benefit of membership that enables you to earn 15 hours of Category I credit. In addition, the program has been approved for 14 hours of prescribed credit by the American Academy of Family Physicians.

RESOLUTIONS ARRIVING

Resolutions from Clinton and Des Moines counties for the 1982 IMS House of Delegates are in hand as this is prepared. They deal with (1) nuclear arms, and (2) availability of Blue Shield explanations of benefits. More resolutions are likely to come from the causes now occurring.

STATEWIDE HMO

January press accounts described preliminary plans by Blue Cross and Blue Shield of Iowa to develop a statewide health maintenance organization. The proposed HMO will be co-joined by an Individual Practice Association. The planning phase may occupy a 12- to 18-month period. Ample opportunity for IMS input will be available in this time period.

MEDICAID ACTIONS

As of 4/1/82, Iowa Social Services will require prior approval for inpatient surgery to a Medicaid recipient if the procedure is on the list of IFMC outpatient procedures (there are about 180 such procedures). A review process will be available when an exception is requested. Two other Medicaid revisions relating to hospital room charges and lengths of stay are under review. Reported previously is the 2.5% reduction in physician Medicaid reimbursements to run from 4/1 to 6/30; what happens beyond that is still under study.

HEALTH PLANNING

Revamping of health planning is occurring in Iowa. The Iowa Health System Agency board is expected to consider this month a reorganized entity to be called Health Policy Corporation of Iowa. This new body will have a 21-member board of 11 consumers and 10 providers; places exist for 3 physicians. Articles and bylaws for the new HPCI will be proposed to the IHSA board in March. This is being called a reorganization of the IHSA rather than a replacement, so a legal status will remain for funding purposes.

CON STATUS

Under new state proposals intended to bring Iowa into conformance with federal stipulations, physicians will be exempt from certificate of need requirements -- except where the equipment is to be used for hospital inpatients. Institutional improvements over \$650,000 will need CON's; \$400,000 is the ceiling in the case of a single piece of equipment.

PKU RULE CHANGE

New rules covering PKU testing will take effect 4/7/82, according to the Birth Defects Institute. The new rules pertain to timing and types of the tests, the status of the laboratory performing the tests, etc. Also the reporting requirements are set forth. A copy of the material is available on request from the IMS.

STATE HEALTH DEPARTMENT

What's called the LENS report (leadership effectiveness/new strategies) is being considered by the Iowa State Board of Health. The report is a product of the Department of Health and contains nearly 40 recommendations to continue or discontinue or consolidate certain functions of the Department. The project will be ongoing.

IOWA MEDICAL SOCIETY INSURANCE SERVICES AVAILABLE TO MEMBER PHYSICIANS

On the following two pages is a summary of the insurance coverages which are available from the Iowa Medical Society. All member physicians are invited and encouraged to review this outline to see if and where any of these coverages may fill a void in or supplement an existing individual insurance program. This suggestion is directed particularly to those physicians who are new to membership in the society.

The Committee on Member Services of the Iowa Medical Society is responsible for the periodic evaluation of these programs to determine their value and receptivity. It is the further duty of the committee to consider and recommend appropriate new coverages.

Any questions or comments regarding these programs may be directed to the administrator as shown or to the headquarters of the Iowa Medical Society, 1001 Grand Avenue, West Des Moines, Iowa 50265 (Telephone—515-223-1401; In-WATS—1-800-422-3070).

INSURANCE PLANS FOR

TYPE

COVERAGE

SPECIAL FEATURES

- 1. PROFESSIONAL LIABILITY INSURANCE PACKAGE**

Provides Basic Professional Liability of \$100,000/\$300,000 or \$250,000/\$500,000 (depending on classification); Premises Liability; Catastrophic Liability from \$1 to \$5 million.

Occurrence or Claims-Made; Guaranteed 3-Year Market; Investment Income Sharing Plan; Active IMS Role in Loss Prevention & Control; Right to Insurability Hearing.
- 2. INCOME PROTECTION ACCIDENT AND SICKNESS DISABILITY**

New maximum benefits available up to \$3,000 monthly. Benefit durations up to lifetime for accident and to age 65 for sickness. Reduced rates for younger members. Other optional benefits available, including new residual disability benefits.

Benefits begin first day of disability for accident and eighth day for sickness or first day if hospital confined for sickness. Optional plans available with benefits beginning the 29th day, 57th day, 92nd day or 183rd day. Claims paid directly from the administrator's office. Special renewal features and conversion option automatically included.
- 3. OFFICE OVERHEAD DISABILITY COVERAGE**

Available from \$500 monthly to a new maximum of \$5,000 monthly as reimbursement for office expenses (rent, employees' salaries, utilities, etc.). New reduced rates for members under age 50.

Benefits begin after a waiting period of 15 days or 30 days with benefits payable up to 24 months. Premiums tax deductible. Special renewal features and conversion option automatically included.
- 4. TERM LIFE INSURANCE (American Mutual)**

Provides up to \$100,000 in low cost term life insurance benefits in increments of \$25,000. Policy is fully convertible after it has been in force one year. Benefits reduce 20% every 5 years beginning at age 50. Plan is renewable to age 70.

Waiver of premium and full conversion privilege after policy has been in force one year. A new member of IMS under age 65 may apply for one unit of coverage with *guaranteed issue* if application is made within 90 days of membership.
- 5. EXCESS TERM LIFE INSURANCE (Crown Life)**

Program is designed to "dove-tail" with American Mutual Life term program. Minimum amount available — \$50,000 with no maximum limit. Policy is guaranteed renewable/non-cancellable which means rates and renewal are guaranteed.

Benefits do not reduce with age. Policy is renewable to age 75 and full conversion available without evidence of insurability until age 65. High non-medical limits which allow the member physician to purchase jumbo amounts of term insurance without medical exam. Waiver of premium automatically included.
- 6. MODIFIED PERMANENT LIFE INSURANCE COVERAGE**

Coverage available from a minimum of \$10,000 with no maximum limits. Premium discount ranging from 8 to 20% depending upon entry age and policy amount. New rates effective in 1982 with provision for both smokers and non-smokers rates.

Modified underwriting allows the substandard risk individual the possibility of insurance at standard rates. Non-medical limits allows the physician under age 55 to apply for \$150,000 coverage without medical exam. For those between ages 55 and 65, \$100,000 may be purchased without medical exam. The discounted premium is a fully portable feature regardless of practice location. Also allows the professionally incorporated physician the option to purchase the insurance through his/her corporation with a portion of the premium tax deductible.
- 7. UNIVERSAL LIFE COVERAGE**

Allows the physician to "buy term and invest the difference" under one contract. Favorable tax treatment of investment fund (currently tax deferred). Premiums and face amount may be adjusted upward or downward depending upon the physician's circumstances. Special premium discount.

Modified underwriting which allows the previously substandard or rated risk the possibility of standard life insurance (high non-medical limits — no exam required). Optional term riders available to cover spouse, children and/or business partner.
- 8. HIGH LIMITS ACCIDENTAL DEATH AND DISMEMBERMENT**

Accidental death, dismemberment and loss of sight covered. Special permanent and total disability feature available. Amounts available from \$25,000 to \$150,000 — Wife and family coverage also available.

24-hour, world wide coverage, aviation coverage as passenger. 365 day coverage. Renewable to age 70. No medical underwriting.
- 9. HOSPITAL/MEDICAL**

Three options available — full benefit — \$100 deductible — \$500 deductible. Benefits available to physicians, their families and employees. Excellent benefits to cover both hospital and medical services.

365-day Comprehensive Hospital. 365-day Blue Shield UCR. Nervous/mental, drug addiction, TB and alcoholism. Optional dental benefits available. Special — Open Enrollment (No medical evidence for year 1982)
- 10. WORKERS' COMPENSATION**

Provides Workers' Compensation Coverage as Required by State Law. Approved Rates Are in Effect. Program Meets Employer's Obligations for Occupational Injuries to Employees.

Is a Savings Plan in That Dividends Are Paid Based on Experience. 35% Return of Premium Has Occurred With Higher Percentage Possible. Safety Counsel Is Provided.

IOWA MEDICAL SOCIETY MEMBERS

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Des Moines, Iowa 50309

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Des Moines, Iowa 50322

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Casualty Reciprocal Exchange
Dodson Insurance Group
P.O. Box 559
Kansas City, Missouri 64141

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Casualty Reciprocal Exchange
Dodson Insurance Group
P.O. Box 559
Kansas City, Missouri 64141

ELIGIBILITY AND HOW TO APPLY

All members may apply through local Aetna agents, Des Moines or Omaha offices of Aetna, or The Prouty Company. Information available from Des Moines Aetna — 1-800-362-1809 or 515-244-5145.

New members eligible for base amount of coverage regardless of past medical history, if application is made within 90 days of membership. All insurable members eligible anytime prior to age 56. Coverage continues to age 70 for active members. Special conversion policy available after age 70. Apply to The Prouty Company — 1-515-278-5580 or Toll Free — (Iowa) 1-800-532-1105.

Applicant must be in active practice, under age 60, and member of IMS. Apply to The Prouty Company — 1-515-278-5580 or Toll Free — (Iowa) — 1-800-532-1105.

Any member under age 65 may apply. New members may apply for one unit of coverage if under 65 with guaranteed issue if done within 90 days of membership. Apply to The Prouty Company — 1-515-278-5580 or Toll Free — (Iowa) — 1-800-532-1105.

Any member under age 65 may apply. Minimum amount — \$50,000 — No maximum amount — Apply to The Prouty Company — 1-515-278-5580 or Toll Free (Iowa) — 1-800-532-1105.

Any member under age 80 may apply. Amount of coverage provided at insured's option with minimum amount of \$10,000. Apply to The Prouty Company — 1-515-278-5580 or Toll Free (Iowa) — 1-800-532-1105.

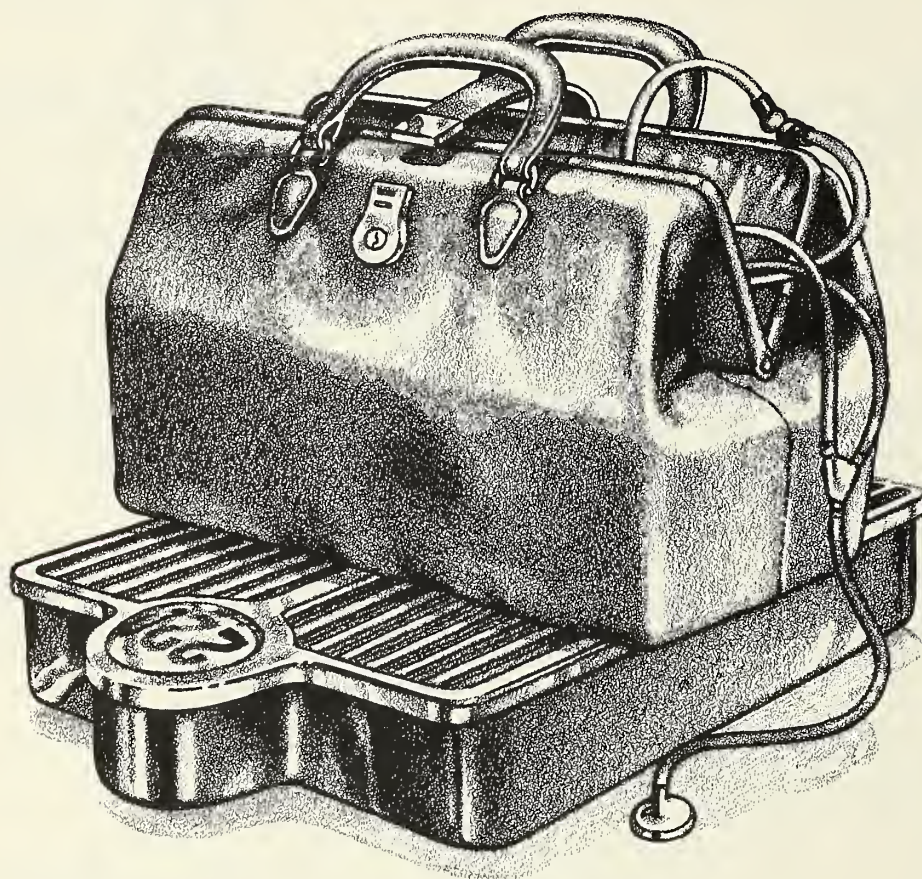
Any member under age 85 may apply. Amount of coverage provided at insured's option with minimum amount of \$10,000. Apply to The Prouty Company — 1-515-278-5580 or Toll Free (Iowa) — 1-800-532-1105.

Any member under age 65, spouse and/or family. Apply to The Prouty Company — 1-515-278-5580 or Toll Free (Iowa) — 1-800-532-1105.

All members, their families and employees. Apply to The Prouty Company — 1-515-278-5580 or Toll Free (Iowa) — 1-800-532-1105.

Apply to Casualty Reciprocal Exchange. Iowa representative, Mr. Ken Coulter, 205 8th Avenue South, Clear Lake, 50428; telephone — 515/357-6739.

You're helping us keep health care costs on a low-fat diet.



Last year, with your help, Blue Cross and Blue Shield of Iowa helped trim the cost of health care for our subscribers.

Programs like Utilization Review, which monitors inpatient admissions for medical necessity; outpatient surgeries; and expansion of coverage for outpatient testing have provided a good start toward controlling costs.

Physician support is critical to the success of these cost containment

measures. By encouraging the increased use of outpatient surgery when medically appropriate and by ordering outpatient testing, you have demonstrated your interest in joining the battle against rising health care costs in Iowa.

We all need to continue to cut the fat out of health care costs.

A united effort can **keep** those costs on a low fat diet.



Blue Cross
Blue Shield
of Iowa

Benign Gastrocolic Fistula With Pancreatic Involvement

JAYANT V. BELSARE, M.D.

Mt. Pleasant, Iowa

THE FIRST CASE of malignant gastrocolic fistula was reported by Haller in 1912.¹ The common cause of gastrocolic fistula is carcinoma of the colon or the stomach. Spontaneous benign gastrocolic fistula is a rare condition.

CASE REPORT

A 63-year-old male patient presented with complaints of abdominal pain. His symptoms included vomiting, black-colored stools, and difficulty in urination. Between February and May 1980 the patient lost 40 pounds of weight and was in a weakened condition. His abdominal pain then subsided.

Previous medical history included an appendectomy, a hemorrhoidectomy, and a history of chronic bronchitis. He was formerly a heavy smoker. In 1971 he had been admitted to the hospital with recurring abdominal pain. Upper gastro-intestinal x-ray studies showed large gastric submucosal folds with evidence of irritability in the duodenum. On April 28, 1976 repeated x-ray studies showed a small inconstant hiatal hernia, enlargement of the gastric submucosal folds and duodenal deformity without evidence of ulceration. Subsequently,

The author is in the private practice of general surgery in Mt. Pleasant, Iowa.

This Iowa physician reports a case of benign spontaneous gastrocolic fistula with pancreatic penetration. This is a rare condition. Careful examination in this case was followed by surgery which produced a good result.

on June 25, 1976, another x-ray study showed a 4 cm sliding hiatal hernia and considerable antral and bulb deformity, presumably from an ulcer.

The patient was examined April 22, 1980, and appeared emaciated. The abdominal examination showed no masses or tenderness with peristalsis being normal. The rectal examination revealed a normal-sized prostate. The remainder of the physical examination was within normal limits.

LABORATORY INVESTIGATIONS

Laboratory investigations revealed as follows: Hct 34%, Hgl 10 gm%, WBC 9,900, Segs 75, Stabs (Bands) 7, Lymphs 13, Basos 0, Monos 4, Eos 1, Carcinoembryonic Antigen level 1.6 ng/ml on May 5, 1980 (normal 0-2.5 ng/ml), UA within normal limits, chest x-ray normal, EKG within normal limits, and IVP suggestive of a partial prostatic obstruction. There was a slight elevation in the alkaline phosphatase and LDH levels. The uric acid and serum calcium levels were slightly low. The serum albumin was 3.3. Colon x-rays on April 15, 1980 demonstrated gastrocolic fistula. The upper gastro-intestinal x-rays on April 18, 1980 failed to demonstrate the fistula. Repeat colon x-rays on April 21, 1980 demonstrated a

THE IOWA MEDICAL FOUNDATION HAS DESIGNATED THIS ARTICLE AS THE HENRY ALBERT SCIENTIFIC PRESENTATION FOR THE MONTH OF MARCH 1982



Figure 1 — Barium enema demonstrating the gastrocolic fistula.

fistula between the distal transverse colon and the stomach. (Figure 1) On this film some mucosal destruction in this region of the colon was thought to be the result of a carcinoma. This was thought to be the cause of gastrocolic fistula. Since the UGI series showed no abnormality and a barium enema was suggestive of carcinoma of the transverse colon, no fiberoptic gastroscopy was done.

The patient was given 2 units of blood on May 3, 1980. Colon preparation included mechanical cleansing with saline enemas and magnesium citrate for 2 days and neomycin sulfate on the day before surgery. Surgery was done on May 6, 1980. A large hard mass was found in the body and tail of the pancreas involving the greater curvature of the stomach and distal transverse colon. The mass was about 12 by 5 cm in size. The spleen showed some areas of white mottling. The liver appeared normal. A hard nodule was palpated in the porta hepatis. The patient's small bowel and remaining colon looked normal. The mass in the pancreas extended to the junction of the head and the body of the pancreas. The portal vein appeared to be free from the tumor. On gross examination of this mass its exact nature could not be determined. However, at the time

it was thought to be carcinoma of the pancreas involving the stomach and the colon. It was thought that a plane could be obtained allowing en bloc resection. The spleen was mobilized and partial gastrectomy with Billroth I gastroduodenal anastomosis, splenectomy, partial pancreatectomy (The pancreas was divided at the level of the portal vein.) and resection of the transverse colon with end-to-end anastomosis was performed. Drains were placed in the lesser sac and brought out through a stab incision in the left upper quadrant of the abdomen.

The patient recovered well from this surgery and was discharged on May 16, 1980. No carcinoma was seen in the pathological examination of the operative specimen. A large perforating ulceration of the stomach with an abscess formation in the parapancreatic and paracolic regions was found. Gastrocolic fistula was present. The gastric ulcer, 4 cm in diameter, was on the posterior wall. The lymph node in the porta hepatis showed dystrophic calcification.

COMMENT

Benign spontaneous gastrocolic fistula involving the pancreas is a rare entity. Most of the benign gastric ulcers are along the lesser curvature of the stomach and thus are not in close proximity to the transverse colon.² Sixty-five cases of benign spontaneous gastrocolic fistula have been reported. Neoplastic disease is the most common cause of gastrocolic fistula. In a series of 4,500 cases, Marshall and Knud-Hansen found 5% of those with gastric and colonic carcinoma developed this complication. Dickson, in a series of 507 consecutive carcinomas of the stomach, reported a 2% incidence of fistula formation.⁴ Colonic carcinoma is the most common cause of spontaneous gastrocolic fistula. Diverticulitis, ulcerative colitis, Crohn's disease, intraperitoneal abscess, pancreatic pseudocyst, other tumors of the large bowel (mostly carcinoids), intestinal tuberculosis, pancreatitis, radiation enteritis, and benign gastric ulcers are the other causes.

As described in this case, a barium enema is the best method to demonstrate gastrocolic fistula.⁵ A barium meal frequently fails to demonstrate gastrocolic fistula. The radiological demonstration of the flow through a gastrocolic fistula from the colon to the stomach is

explained by the fact that the stomach undergoes receptive relaxation and therefore the intragastric pressure is lower than that in the colon.⁶

Benign gastrocolic fistula has been treated by different methods. 1) *carbenoxolone sodium*. It is suggested in cases of benign gastrocolic fistula where surgery is contraindicated a conservative approach using carbenoxolone may be of value.⁶ This drug is not commercially available in the U.S.A. 2) *a two-staged procedure*. Pfieffer and Kent in 1939 introduced a proximal colostomy as the first stage followed by definite resection of the fistula with gastric and colonic reconstruction when the patient's condition has improved.⁷ 3) *one-stage en bloc resection*. Marshall and Knud-Hansen in 1957 described en bloc resection.³ This seems to be the method of choice for treating this condition in good-risk patients. Cimetidine, TPN, and antibiotics have been recommended in preoperative preparation.

In the case described here, the unusual features were minimal symptoms except for the weight loss at the time of surgery, barium enema suggestive of carcinoma of the transverse

colon and marked involvement of the body and tail of the pancreas mimicking carcinoma. On exploration when such a hard mass involving the pancreas, stomach and colon is noted, the inclination is to consider it inoperable. However, careful examination and evaluation of its fixity should be done and, if possible, en bloc resection should be performed.

SUMMARY

A case of benign spontaneous gastrocolic fistula with pancreatic penetration is reported. A barium enema demonstrated the fistula. A barium meal was negative. At exploratory celiotomy a hard mass involving the stomach, transverse colon, and the body and tail of the pancreas was noted. Its benign nature could not be determined on gross examination. En bloc resection consisting of partial gastrectomy, splenectomy with partial pancreatectomy and resection of the transverse colon was performed. The patient recovered uneventfully. Pertinent literature is reviewed.

REFERENCES

The references indicated are available on request either from the author or the JOURNAL OF THE IOWA MEDICAL SOCIETY.

Doctor, is it time for a change?

- You're spending too much time on paperwork.
- You want to live in Europe, not just vacation there for a couple of weeks.
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One of man's most amazing explorations and scientific adventures, the successful Gemini flight program was a triumph of imagination and—teamwork. Two men learned to operate in space, to rendezvous, to dock, and to work outside their spacecraft in the hard vacuum of outer space. Not only did they coordinate their efforts with ground backup, they also complemented each other's activities within the close confines of the space capsule.



High School Basketball Knee Ligament Injuries

PETER D. WIRTZ, M.D.

Des Moines, Iowa

THIS IS A BRIEF REPORT ON a survey of significant knee injuries among male and female varsity basketball players in the central Iowa high schools. The survey was conducted during and after the 1980-81 basketball season in 22 schools and revealed more injuries among females. For every school with a reported injury the opposite sex team was surveyed. A significant injury was defined as one that kept an athlete out of competition for 2 or more days. The majority of limiting injuries were to the lower extremity, with the knee joint being the most often involved.

The knee joint injuries ranged from contusions to complete ligament ruptures. The minor strains and contusions were limiting for several days with eventual return to full competition. Athletes with ligament ruptures and those requiring meniscectomy were restricted longer or were withdrawn from competition for the season.

In this survey there were 16 ligament ruptures in 15 female athletes and one to a male athlete. The male athlete suffered an isolated anterior cruciate ligament rupture and was out for the season. One female athlete suffered a medial collateral and an anterior cruciate ligament while the other 14 ligament injuries were

A limited survey of central Iowa prep athletes showed significantly more knee injuries among female athletes. The author predicts greater numbers of these injuries and urges stress on lower extremity endurance.

anterior cruciate ruptures with or without meniscal tear. The diagnoses in these cases were verified by arthroscopy exam in 13 and one by clinical exam. Those requiring a partial meniscectomy were done with arthroscopic control. None of these have required a ligament reconstruction to date, but a certain percentage will become unstable and require reconstruction or partial meniscectomy.

The findings of the survey revealed more injuries in the female guard court than the forward court (11:4). Including non-surgical injuries 17 occurred in November, December and January, with one in March. As best as can be determined from the histories, 8 injuries occurred while "jump-stopping." The others were typical valgus and twisting situations.

Significant differences have been shown between the female and male knee joints. The bones in the female are smaller as are the ligaments and menisci. These smaller ligaments and tendons have less tensile strength, as well as less friction, to make the joints more mobile.¹ The female body has 23% muscle as compared to 60% for males, so female strength at best will approximate 60% of the male of equal size.² The mechanism of ligament injury varies depending on the ligament injured. A varus and internal injury often causes an anterior cruciate ligament rupture alone. Such a mechanism is represented by sudden deaccel-

Dr. Wirtz is in the private practice of orthopedic surgery in Des Moines.

eration or stopping. A valgus and external rotation injury often causes a medial collateral ligament and anterior cruciate ligament rupture.³ "Clipping" is such a mechanism.

As the female varsity athlete becomes larger and moves with more kinetic force, there will continue to be knee injuries. To prevent these severe knee ligament injuries it is to be recommended that the female basketball athlete

stress lower extremity endurance and minimize the deceleration activities (stopping) at the center line.

REFERENCES

1. Powers, J. A.: Characteristic features of injuries in the knee in women. *Clin. Ortho.*, 143:120, 1979.
2. Norogren, B.: Arthropometric measures and muscle strength in young women. *Second J. Rehabilitation Med.*, 4:165, 1972.
3. Warren, R. F. and J. L. Marshall: Injuries of the anterior cruciate and medial collateral ligaments of the knee. *Clin. Ortho.*, 136:191, 1978.

A Point Of View

WHAT THIS COUNTRY NEEDS . . .

IT WAS in the early 1900's that Thomas Riley Marshall announced that "What this country needs is a good 5 cent cigar." Since that time, there have been many other pronouncements about what this country needs.

Recently, another commentator stated that "What this country needs is a good doctor," and more recently, an attorney's question, "What is your definition of a good doctor?" forced me to focus on this thorny question.

Now was my chance! What is a good doctor? One who knows what he is doing, has current medical knowledge, has kept up on things. Sure, that's it. But what else? There must be more. One who is kind, considerate, compas-

sionate; one I can talk with — yes . . . and one whom I can be myself with. No facades, no barriers to honest expression. Right! A good doctor is also someone who can be himself with me — honest and sharing — one who can cry with me if needs be; one who can lead and guide, but still teach, and help me develop independence.

A good doctor is a person; a real human being who understands himself and is able to accept himself with his weaknesses and mistakes, and still like himself. A good doctor is one who can see his patients with their mistakes and weaknesses and still like them, and not pass judgment.

A good doctor — well, maybe I don't even know for sure. How about you? — *Dennis J. Walter, M.D., Des Moines, Iowa*

Letter to Editor

ON MEDICINE IN CHINA

ABOUT a year and a half ago my wife and I had a trip to China with a medical group and find that Dr. Caros' article (A View of Medical Care in China/January 1982 *JOURNAL OF THE IOWA MEDICAL SOCIETY*) gives a slightly different impression from what we saw.

Mentioning that it was said that 16% of U.S. children live in poverty does not prove that the medical care in the small towns in China is as good as the worst that we offer. The big thing China has done is to succeed in keeping population down. She mentioned "sterilized" rubber tubing. We heard that fever after surgery is a big problem there. We had this

until we found out that rubber tubing cannot be sterilized.

As far as journals in English being read, we found very few who spoke English and were not shown libraries with journals so wonder how much is available.

Birth control medication, as well as other medication, was not available. Most treatment was for symptoms and usually was acupuncture and herb medicine. Of course, antibiotics are not used for otitis media. None is available. There are only 12,000 miles of paved road in all of China and no refrigerated trucks. Nothing can be transported any distance and usually what is available is what can be produced locally. — *E. L. Manning, M.D., Davenport, Iowa*

ROW 1



SEAT 1

**THE HIGHLANDER INN/UNIVERSITY HOSPITALS
IOWA CITY, IOWA**

SCIENTIFIC SESSION

The 1982 Scientific Session of the Iowa Medical Society will be in Iowa City on Tuesday, Wednesday, and Thursday, April 6, 7 and 8. Program sessions are scheduled at the Highlander Inn on Tuesday and Thursday, and the University Hospitals on Wednesday. Registration opportunity will be available each day.

THE PROGRAM COMMITTEE

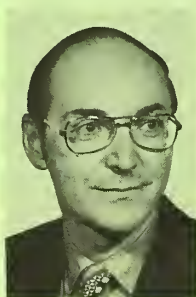
The 1982 Program Committee is chaired by Douglas B. Dorner, M.D., Des Moines. Other physician members are Mary Ann Arends, M.D., Manchester; Richard M. Caplan, M.D., Iowa City; John H. Gay, M.D., Des Moines; Don C. Green, M.D., Des Moines; R. Bruce Trimble, M.D., Mason City, and James W. White, M.D., Dubuque.



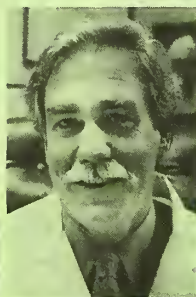
DR. DORNER



DR. ARENDS



DR. CAPLAN



DR. GAY



DR. GREEN



DR. TRIMBLE



DR. WHITE

HOTEL RESERVATIONS

The Highlander Inn is the headquarters hotel for the 1982 Scientific Session. Room reservations may be made by calling directly the toll-free number 1/800/272-6444. Please request that your room be taken from the block reserved by the IMS.

PRESIDENT'S MESSAGE

All member physicians are invited and encouraged to attend the 1982 IMS Scientific Session, which is being co-sponsored by the University of Iowa College of Medicine. The program is geared to the interest of the practicing physician. A faculty of over 60 individuals will discuss a wide range of subjects, and the information to be presented can be well utilized by physicians in everyday patient care. Indeed, the program is designed to enhance the physician's medical knowledge and professional competence. The Program Committee is commended for arranging an outstanding series of presentations which will benefit both physicians and the patients they serve.



JOHN H. KELLEY, M.D., President
Iowa Medical Society

PROGRAM

All speakers with an academic designation are members of faculty at the University of Iowa College of Medicine unless otherwise noted.

TUESDAY, APRIL 6 THE HIGHLANDER INN

11:00 A.M. — REGISTRATION
Main Lobby

GENERAL SESSION

Piper's Ballroom/Main Floor

1:00 P.M. — WELCOMING REMARKS
John H. Kelley, M.D., Des Moines
President, Iowa Medical Society



DR. ECKSTEIN



MR. FREEDMAN

John W. Eckstein, M.D., Iowa City
Dean, University of Iowa College of Medicine

James O. Freedman, Iowa City
President, University of Iowa

NUTRITION

A Variety of Views

1:15 P.M. — NUTRITION OVERVIEW (Introductory Remarks)
Lloyd J. Filer, M.D. (Moderator), Professor,
Department of Pediatrics

1:30 P.M. — FOOD ADDITIVES AND CONTAMINATES
Thomas A. Anderson, Ph.D., Professor,
Department of Pediatrics

1:45 P.M. — FAD DIETS
Beverly McCabe, M.S., Dietitian, University Hospitals

2:05 P.M. — PSYCHOLOGY OF OBESITY
Allen Silberman, Ed.D., Des Moines, Clinical Psychologist

2:25 P.M. — SURGICAL MANAGEMENT OF OBESITY
Edward E. Mason, M.D., Professor and Acting Head, Department of Surgery

2:35 P.M. — PANEL DISCUSSION

2:50 P.M. — RECESS



DR. FILER



DR. MODLIN

STRESS MANAGEMENT

In Today's Medical Milieu

3:05 P.M. — STRESS AND THE PHYSICIAN
Herbert C. Modlin, M.D., Topeka, Kansas, The Menninger Foundation

BALDRIDGE-BEYE MEMORIAL PRESENTATION
(Sponsored by The Iowa Medical Foundation)

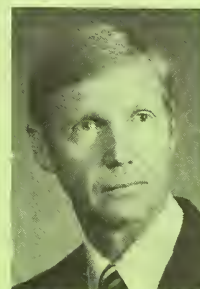
REACTOR PANEL

Robert E. Rakel, M.D., Professor and Head
Department of Family Practice

Hormoz Rassekh, M.D., Private Practice of Psychiatry, Council Bluffs and Chairman, IMS Committee on Assistance Program for Troubled Physicians.



DR. RASSEKH



DR. RAKEL

5:00 P.M. — ADJOURNMENT

WEDNESDAY, APRIL 7

University Hospitals

7:30 A.M. — REGISTRATION
Medical Alumni Auditorium/E-331
(Coffee and rolls available)

GENERAL SESSION

Medical Alumni Auditorium/E-331

WHAT'S NEW IN MEDICINE? PART I

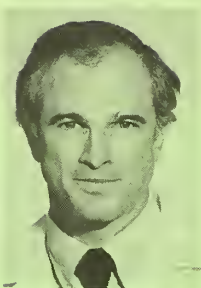
8:00 A.M. — ANESTHESIA
Martin D. Sokoll, M.D., Professor, Department of Anesthesiology

8:08 A.M. — DERMATOLOGY
John S. Strauss, M.D., Head, Department of Dermatology

8:16 A.M. — FAMILY PRACTICE
Robert E. Rakel, M.D., Professor and Head, Department of Family Practice



DR. DOLAN



DR. HAMMONS

8:24 A.M. — PATHOLOGY

Glenn T. Hammons, M.D., Assistant Professor,
Department of Pathology

8:32 A.M. — INTERNAL MEDICINE

Gary W. Hunninghake, M.D., Associate Professor,
Department of Internal Medicine

8:40 A.M. — NEWER CEPHALOSPORINS

Sam T. Donta, M.D., Professor, Department of
Internal Medicine

**9:00 A.M. — TOWARD OPTIMAL USE OF THE
LABORATORY AND X-RAY**

ARTHUR ERSKINE MEMORIAL LECTURE

Kenneth D. Dolan, M.D., Professor, Department
of Radiology

Glenn T. Hammons, M.D., Assistant Professor,
Department of Pathology

9:30 A.M. — RECESS

**9:50 A.M. — DIABETES MELLITUS: NEW CONCEPTS
IN MANAGEMENT**

Barry Ginsberg, M.D., Assistant Professor of
Internal Medicine

**10:15 A.M. — PERIODIC HEALTH ASSESSMENTS (PAPS
AND PELVICS — WHO AND WHEN?)**

Robert B. Wallace, M.D., Professor, Department
of Preventive Medicine

10:45 A.M. — RECESS (Conferees will have 10 minutes
to join one of four concurrent sessions, as listed
below. They will be free to move from one
session to another, as desired.)

DOCTOR'S CHOICE

(Panel Discussions)

MEDICINE — Bean Conference Room/SE-301

10:55 A.M. — CALCIUM BLOCKERS

Donald D. Brown, M.D., Associate Professor,
Department of Internal Medicine

**11:15 A.M. — CURRENT ISSUES IN CARE OF
PATIENTS WITH ACUTE MYOCARDIAL
INFARCTION**

Carl W. White, M.D., Associate Professor,
Department of Internal Medicine

**11:35 A.M. — ASTHMA: CURRENT CONCEPTS AND
TREATMENT**

Hal B. Richerson, M.D., Professor, Department of
Internal Medicine

**11:55 A.M. — INTERPRETATION OF LABORATORY
TESTS IN RHEUMATOLOGY: RHEUMATOID
FACTORS AND ANA'S**

Robert F. Ashman, M.D., Professor, Department of
Internal Medicine

SURGERY — Petersen Conference Room/E-140

**10:55 A.M. — CRYOTHERAPY FOR NASAL
OBSTRUCTION AND NASAL HEADACHES**

Brian F. McCabe, M.D., Professor and Head,
Department of Ophthalmology and Maxillofacial
Surgery

11:15 A.M. — TEMPORAL ARTERITIS

Sohan S. Hayreh, M.D., Professor, Department of
Ophthalmology

**11:35 A.M. — IMPLANT ARTHROPLASTY IN
RHEUMATOID FINGERS**

William F. Blair, M.D., Assistant Professor,
Department of Orthopaedics

**11:55 A.M. — UPDATE ON NEUROLOGICAL
SURGERY**

John C. VanGilder, M.D., Professor, Department
of Neurosurgery

OBSTETRICS/GYNECOLOGY — Medical Alumni
Auditorium/E-331

10:55 A.M. — ESTROGEN REPLACEMENT THERAPY

Frederick K. Chapler, M.D., Professor,
Department of Obstetrics and Gynecology

11:15 A.M. — GENITAL HERPES INFECTIONS

Rudolph P. Galask, M.D., Professor, Department
of Obstetrics and Gynecology

11:35 A.M. — GYNECOLOGY ONCOLOGY — 1982

Barrie Anderson, M.D., Associate Professor,
Department of Obstetrics and Gynecology

11:55 A.M. — FETAL ASSESSMENT TESTS

Roy M. Pitkin, M.D., Professor and Head,
Department of Obstetrics and Gynecology

10:55 A.M. — RECENT ADVANCES IN ASTHMA
Edward G. Nassif, M.D., Ames, Private Practice of
Pediatric Allergy

**11:15 A.M. — DETECTION AND MANAGEMENT OF
REYES SYNDROME**
Stephen C. Elliott, D.O., Des Moines, Pediatric
Hematologist and Oncologist, Blank Children's
Hospital

11:35 A.M. — THE AUTISTIC CHILD
Stanley I. Levine, M.D., Ottumwa, Private Practice
of Pediatrics

11:55 A.M. — KAWASKI DISEASE — AN OVERVIEW
Basaviah Chandramouli, M.D., Des Moines,
Private Practice of Pediatric Cardiology

**12:15 P.M. — TAKE A BOX LUNCH AND GO ASK THE
EXPERT!**

Physicians will have opportunity during the noon
break to purchase a box lunch and take it to a
department-of-choice, where faculty will be
available to discuss specific problems. Following
is a listing of the Departments which will be open
for visits with host faculty: (Information regarding
department locations will be available at the
meeting).

Anesthesia:	Martin Sokoll, M.D.
Dermatology:	John Strauss, M.D.
Family Practice:	Robert Rakel, M.D.
Internal Medicine:	Lewis January, M.D. and Charles Helms, M.D.
Neurology:	Maurice Van Allen, M.D.
Ophthalmology:	Frederick Blodi, M.D.
Orthopaedics:	Reginald Cooper, M.D.
Otolaryngology:	Brian McCabe, M.D.
Pediatrics:	James Hanson, M.D.
Psychiatry:	John Clancy, M.D.
Surgery:	Edward Mason, M.D.
Urology:	Charles Hawtry, M.D., Stephen Loening, M.D., and Walter Gerber, M.D.

GENERAL SESSION

Medical Alumni Auditorium/E-331

WHAT'S NEW IN MEDICINE? — PART II

1:45 P.M. — NEUROLOGY
Maurice W. Van Allen, M.D., Professor and Head,
Department of Neurology



DR. McCABE



DR. SMITH



DR. STRAUSS



DR. COOPER

1:53 P.M. — OBSTETRICS & GYNECOLOGY
Roy M. Pitkin, M.D., Professor and Head,
Department of Obstetrics and Gynecology

2:01 P.M. — OPHTHALMOLOGY
Frederick C. Blodi, M.D., Professor and Head,
Department of Ophthalmology

2:09 P.M. — ORTHOPAEDICS
Reginald R. Cooper, M.D., Professor and Head,
Department of Orthopaedics

2:17 P.M. — OTOLARYNGOLOGY
Brian F. McCabe, M.D., Professor and Head,
Department of Otolaryngology and Maxillofacial
Surgery

**2:25 P.M. — EMERGENCY MEDICAL SERVICES:
WHAT'S NEW?**
Albert E. Cram, M.D., Associate Professor of
Surgery and Chairman, Governor's Advisory
Council on EMS

**2:40 P.M. — PEARLS FROM THE CONSULTANT (THE
NEW . . . AND THE OVERLOOKED)**

OTOLARYNGOLOGY AND MAXILLOFACIAL SURGERY

Brian F. McCabe, M.D., Professor and Head,
Department of Otolaryngology and Maxillofacial
Surgery

GERIATRICS — Ian M. Smith, M.D., Professor,
Department of Internal Medicine

DERMATOLOGY — John S. Strauss, M.D.,
Professor and Head, Department of Dermatology

**ORTHOPAEDIC SURGERY — Reginald R.
Cooper, M.D.,** Professor and Head, Department of
Orthopaedic Surgery

3:20 P.M. — RECESS

3:40 P.M. — EVALUATION OF LEG DISCOMFORT

Harold P. Adams, M.D., Associate Professor,
Department of Neurology

Wade C. Lamberth, Jr., M.D., Assistant Professor,
Department of Surgery

Thomas R. Lehmann, M.D., Assistant Professor,
Department of Orthopaedic Surgery

Douglas B. Dorner, M.D., (Moderator), Private
Practice, Vascular Surgery, Des Moines

**4:20 P.M. — GENETIC COUNSELING AND
COMMON CONGENITAL SYNDROMES**

James W. Hanson, M.D., Associate Professor,
Department of Pediatrics

4:50 P.M. — ADJOURNMENT

**THURSDAY, APRIL 8
HIGHLANDER INN**

7:30 A.M. — REGISTRATION

Pipers Ballroom/Main Floor
(Coffee and rolls available)

GENERAL SESSION

Pipers Ballroom/Main Floor

**WHAT'S NEW IN MEDICINE PANEL:
PART III**

8:00 A.M. — PEDIATRICS

Fred G. Smith, Jr., M.D., Professor and Head,
Department of Pediatrics

8:08 A.M. — PSYCHIATRY

George Winokur, M.D., Professor and Head,
Department of Psychiatry

8:16 A.M. — RADIOLOGY

Kenneth D. Dolan, M.D., Professor, Department
of Radiology

8:24 A.M. — SURGERY

Edward E. Mason, M.D., Acting Head,
Department of Surgery

8:32 A.M. — UROLOGY

Bernard Fallon, M.D., Associate Professor,
Department of Urology

8:40 A.M. — BREAK

MEDICINE — Pipers Ballroom

8:45 A.M. — CURRENT ISSUES IN CHEMOTHERAPY

C. Patrick Burns, M.D., Professor, Department of
Internal Medicine

9:05 A.M. — BONE MARROW TRANSPLANTATION

Lynell W. Klassen, M.D., Assistant Professor,
Department of Internal Medicine

**9:25 A.M. — CURRENT MANAGEMENT OF
NON-HODGKINS LYMPHOMA**

James O. Armitage, M.D., Assistant Professor,
Department of Internal Medicine

**9:45 A.M. — STRATEGIES IN MANAGEMENT OF
ADVANCED CARCINOMA OF THE BREAST**

Michael P. Corder, M.D., Associate Professor,
Department of Internal Medicine

PSYCHIATRY AND NEUROLOGY — Gold Room

**8:45 A.M. — CURRENT MANAGEMENT OF GRAND
MAL EPILEPSY**

Richard W. Fincham, M.D., Professor, Department
of Neurology

9:05 A.M. — ALZHEIMER'S DISEASE

Antonio J. Damasio, M.D., Professor, Department
of Neurology

**9:25 A.M. — CURRENT CONCEPTS ON
EVALUATION AND MANAGEMENT OF
DEPRESSION**

Nancy C. Andreasen, M.D., Professor, Department
of Psychiatry

**9:45 A.M. — RECOGNITION AND ELIMINATION OF
COMMON PROBLEMS IN THE
PATIENT-PHYSICIAN RELATIONSHIP WHEN
MAKING A PSYCHIATRIC DIAGNOSIS**

Reuben B. Widmer, M.D., Professor, Department
of Family Practice

**SURGERY/OBSTETRICS & GYNECOLOGY — Garden
Room**

**8:45 A.M. — PRE AND POST OPERATIVE
NUTRITION FOR THE CANCER PATIENT**

Adel S. Al-Jurf, M.D., Ch.B., Associate Professor,
Department of Surgery

9:05 A.M. — MINIMAL BREAST CANCER

Peter R. Jochimsen, M.D., Associate Professor,
Department of Surgery

9:25 A.M. — CANCER OF THE ESOPHAGUS

Nicholas P. Rossi, M.D., Professor, Department of
Surgery

9:45 A.M. — GYNECOLOGICAL MALIGNANCY
George W. Chapman, Jr., M.D., Assistant
Professor, Department of Obstetrics & Gynecology

10:05 A.M. — RECESS

GENERAL SESSION

Pipers Ballroom/Main Floor

10:20 A.M. — CONTINUUM OF CARE: DISCHARGE
PLANNING

Margaret Donnelly, Coordinator, Post Hospital
Care Planning Unit, Department of Social
Services, University Hospitals

HEALTH CARE COSTS

10:35 A.M. — THE IOWA SCENE

R. Melvin Henderson, Ph.D., Chairman,
Governor's Commission on Health Care Costs,
Dean of Academic Affairs, Simpson College,
Indianola

10:50 A.M. — INDUSTRY'S CONCERN AND
INVOLVEMENT

Robert Burnett, President, The Meredith
Corporation, Des Moines

11:05 A.M. — THE NATIONAL PERSPECTIVE

John S. Zapp, D.D.S., Director, Washington
Office, American Medical Association

11:20 A.M. — QUESTION AND ANSWER SESSION

William R. Bliss, M.D. (Moderator), Chairman,
Iowa Voluntary Cost Containment Committee, and
Member, Governor's Commission on Health Care
Costs, Ames



DR. HENDERSON



MR. BURNETT



DR. ZAPP



DR. BLISS



DR. FELTON



DR. OLIVER



DR. SEEBOHM



DR. CAREW

11:45 A.M. — SPECIAL LUNCHEON AND PROGRAM
HEALTH MANPOWER: NEW ROLES FOR THE
HEALTH CARE TEAM?

Geraldene Felton, Ed.D., R.N., Professor and
Dean, College of Nursing

Denis R. Oliver, Ph.D., Director, Physician
Assistant Program, College of Medicine

Paul M. Seebohm, M.D., Executive Associate
Dean, College of Medicine

David P. Carew, Ph.D., Assistant Dean for
Undergraduate Affairs, College of Pharmacy

Sam Levey, Ph.D. (Moderator), Professor and
Head, Graduate Program in Health and Hospital
Administration and Center for Health Services
Research

1:15 P.M. — ADJOURNMENT

CME CREDIT

The 1982 Scientific Session of the Iowa Medical Society is co-sponsored by the University of Iowa College of Medicine. As an organization accredited for CME, the U. of I. College of Medicine certifies that this CME offering meets the criteria for 15 hours in Category I of the AMA Physician's Recognition Award, provided it is used and completed as designated.

In addition, the program has been approved for 14 hours of prescribed credit by the American Academy of Family Physicians.

SPECIAL EVENING EVENTS

TUESDAY, April 6

RECEPTION — A reception for physicians and their spouses will occur from 6 p.m. until 7 p.m. in the Pipers Ballroom, Highlander Inn. This social event is sponsored by the University of Iowa Foundation and the U. of I. College of Medicine.

WEDNESDAY, APRIL 7

RECEPTION — A "wine and cheese" reception for physicians and their spouses will be sponsored by the Iowa Medical Political Action Committee from 6:15 p.m. until 7 p.m. in the Pipers Ballroom.



The Honorable James Leach

BANQUET — The IMS Scientific Session banquet will begin at 7 p.m. in the Pipers Ballroom. Immediately preceding dinner, the OLD GOLD SINGERS will entertain.

The Honorable James Leach, Iowa's Congressman for the First District, will be a special guest at the banquet. He will

comment on national legislation and concerns of particular interest to Iowans — and to physicians.

LUNCHEONS

WEDNESDAY, APRIL 7 — Physicians will have opportunity to purchase a box lunch at University Hospitals, and take it to a department-of-choice to discuss specific problems with College of Medicine faculty.

THURSDAY, April 8 — The Scientific Session will conclude with a special luncheon program beginning at 11:45 a.m. in the Pipers Ballroom/Highlander Inn. A panel of experts will discuss "Health Manpower: New Roles for the Health Care Team?"

AUXILIARY

Spouses of physicians will have opportunity to join a special Auxiliary tour of the Old Capitol at 10:15 a.m. on Wednesday, April 7.

A luncheon is scheduled at the Highlander Inn at noon. Mrs. Janusz Bardack, of Iowa City, will speak on the subject "Stress in the Family of a Handicapped Person."

Reservations should be made with Sandy Nichols, Auxiliary Staff Secretary, at the IMS headquarters office (WATS Line: 1-800-422-3070).

REGISTRATION FORM

A registration form is provided for use by member physicians who wish to indicate their plans to attend the 1982 IMS Scientific Session. Its use is welcomed and urged in that receipt of advance registrations will aid in necessary planning by the Program Committee.

ACKNOWLEDGMENT

The physician members of the Iowa Medical Society would like to extend their special thanks to the companies listed below which have pro-

Ayerst Laboratories
Blue Cross/Blue Shield of Iowa
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Appreciation is also extended to Blue Shield for sponsoring the coffee functions for physicians and their spouses, and to The University of Iowa Foundation and College of Medicine for hosting

vided educational grants in support of the 1982 IMS Scientific Session. This contribution to post-graduate medical education is most appreciated.

The Purdue Frederick Company
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The Upjohn Company

the reception on Tuesday, April 6, and Iowa Medical Political Action Committee for hosting the reception on Wednesday, April 7. The Society is grateful for this support.

1982 SCIENTIFIC SESSION REGISTRATION FORM

Please Detach and Return This Form to IMS Headquarters

I PLAN TO ATTEND _____

	PLEASE CHECK	NUMBER ATTENDING
The Scientific Session (April 6, 7 and 8)	_____	_____
On Tuesday (4/6)	_____	_____
On Wednesday (4/7)	_____	_____
On Thursday (4/8)	_____	_____
Tuesday Reception	_____	_____
Wednesday "Box" Luncheon (\$3.00)	_____	_____
Wednesday Reception/Banquet (\$12.00)	_____	_____
The Thursday Luncheon (\$5.50)	_____	_____

Advance Payment For Meal Functions Is Welcomed and Urged
Please Make Checks Payable to The Iowa Medical Society

Name (Please Print) _____

Address _____

(Room Reservations Should Be Made Directly With The Highlander.
The Toll Free Number Is 1/800-272-6444).



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COMMENTING EDITORIALLY

MARION E. ALBERTS, M.D.
SCIENTIFIC EDITOR

IMS SCIENTIFIC SESSION

IT HAS BEEN A LONG, cold miserable winter. Hopefully, by the first part of April, the snow will have disappeared under the warmth of bright sunshine. The roads and highways should be free of ice, and for the members of IMS all roads will lead to Iowa City for the annual Scientific Session on April 6, 7 and 8.

This issue of the JOURNAL contains the program which has been developed by the diligent members of the scientific program committee. There should be something of interest for nearly every physician. Take the time to read the offerings; mark the calendar; make the proper reservations, and join your colleagues for one, two, or all three days of refreshment to the mind, body and soul. — M.E.A.

RECENT BOOKS

CAUTION: KINDNESS CAN BE DANGEROUS TO THE ALCOHOLIC (Misguided pseudokindness may retard recovery), 1981, by Abraham J. Twerski. Englewood Cliffs, New Jersey. Price, \$9.95.

HAVING A BABY (A guide for the mother-to-

Letter to the Editor:

ABOUT STERILIZING

Dear Editor:

After reading your admonition regarding hand washing and stethoscope sterilizing, I cultured the bell and diaphragm ends of my office scope on blood agar.

Bell grew 3 colonies of staph epidermidis, a yellowish colony that didn't hemolyze and 1 colony of a fungus. The diaphragm grew 3 colonies of apparent staph epidermidis.

No great cause for alarm or need to autoclave?

Have you tried this? — J. W. Reinertson,
M.D., F.A.A.P., Cedar Rapids

EDITOR'S NOTE

Two separate cultures were done. The first time there were approximately 500 colonies, of which 5% were Staphylococcus aureus (coagulase positive). The second culture yielded about 300 colonies, of which 60% were Staphylococcus epidermidis (coagulase negative), 30% Diphtheroids, 5% Neisseria sicca, 4% Bacillus subtilis and 1% miscellaneous skin flora.

However, would you not agree that stethoscopes in the neonatal nurseries should be sterilized?

Also, regarding both clean stethoscopes, as well as clean hands, I am certain our patients would feel relieved to know that physicians subscribe to the principles of hygiene.

be), 1981, by Eric Trimmer. St. Martin's Press, New York. Price, \$8.95.

CURRENT MEDICAL DIAGNOSIS AND TREATMENT, 1981, by Marcus A. Krupp and Milton J. Chatton. Lange Medical Publications, Los Altos, California. Price, \$21.00.

BURN OUT: THE HIGH COST OF ACHIEVEMENT, 1980, by Herbert J. Freudenberger. Doubleday & Co. Inc., New York. Price, \$9.95.



OUR MAN ON EDUCATION

RICHARD M. CAPLAN, M.D.

NOSTALGIA FOR THE FUTURE

SURELY EVEN GREAT MINDS and revered persons can prove to be wrong in various particulars, though they retain our admiration in other respects. Witness how Socrates in the *Phaedrus* voices his wariness of writing, arguing that its widespread employment would destroy memory and wisdom by enabling people to compile quantities of lifeless information. Indeed, widespread literacy and prolific use of writing have produced an incredible amount of "lifeless information," yet it seems not to have destroyed memory (and probably not wisdom).

But such reticence to adopt new developments will surely persist always. Imagine how uneasy those who used, copied and loved parchment scrolls must have felt about the invention of the book and the later development of movable type. Perhaps it was something like the way I felt recently when my tour guide at the National Library of Medicine, on demonstrating their new capability for computerized data retrieval and display, cheerily added, "In another few years no one will any longer have need of books."

An author I was recently reading, who dealt with the topic of inappropriate use of words, gave as an example the phrase, "nostalgia for the future." Although nostalgia (derived from Greek *nostos*, return, and *algos*, pain) cannot logically be felt for the future, the sense of yearning or sentimental attraction to the past is

a part of human behavior and thinking patterns. In a wonderful poem that I've always enjoyed, "Animals," Walt Whitman praises them for some of their characteristics that are so un-human. He includes the lines, "*They do not lie awake in the dark and weep for their sins;/Not one kneels to another, nor to his kind that lived thousands of years ago; . . .*"

To be poised at the present and able to remember the past, yet to realize in full consciousness that there will be a future is uniquely human. But the very richness of our human powers to conceptualize makes us much difficulty when our attachment to prior ways impedes our ability to progress normally into the future. Such "hang-ups" occur in all aspects of our development. For example, there are physical kinds, such as the embryologic failure of closure that produces cleft lip or spina bifida. Corresponding events seem to happen in the intellectual sphere, producing persons who never develop thinking skills beyond the

. . . whether we become generally closed-minded or, instead, generally receptive to new concepts.

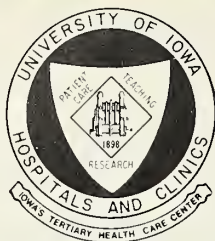
level of third grade. And if one is to believe Freud, emotional development can likewise be arrested at the narcissistic stage or the oedipal latent stage, and so on. It seems reasonable to speculate that hang-ups occur also with those of us who are fully mature; they reduce our ability to be receptive to new ideas and ways. Most of us become fixed at some level of habit or tradition while a few others seem able to change and grow more readily.

What a fascinating problem: to speculate among many possibilities on aspects of our genes, our early training, our cerebral architecture and blood supply, our circumstances of positive and negative conditioning — all of which determine whether we become generally closed-minded or, instead, generally receptive to new concepts.

Participating in continuing medical education may not convert us from being stuck-in-our-ways to being old-dogs-learning-new-tricks, but it may provide solace to those who wish to learn and find they still can. To those who cherish the category of learning-new-tricks, such iterated proof is indispensable.

Dr. Caplan is Associate Dean for Continuing Medical Education at The University of Iowa College of Medicine.

DRUG THERAPY REVIEW



UNIVERSITY OF IOWA HOSPITALS AND CLINICS

REYNOLD SPECTOR, M.D., Editor

IMMUNOPROPHYLAXIS OF NON-B HEPATITIS (Hepatitis A and Non-A Non-B Hepatitis)

BY THE MID 1940s, clinicians and epidemiologists had already recognized that 2 forms of hepatitis existed which could be differentiated by their short (2 to 6 weeks) or long (2 to 6 months) incubation periods. Further studies in the United States and Great Britain clearly showed that the short-incubation hepatitis was transmitted primarily by the fecal-oral route whereas the long-incubation hepatitis was transmitted by serum.^{1, 2} The general clinical and epidemiological characteristics of infectious and serum hepatitis were well established by the early 1950s. But it was not until Blumberg discovered the Australia antigen in 1967 and its relationship to serum hepatitis was recognized that the modern hepatitis era began. The actual infectious agent of serum hepatitis, the Dane

particle, was found shortly thereafter and is now the prototype of a new class of viruses, the Hepadna viruses. Much of the current knowledge of hepatitis B (HB) was discussed in an earlier article in this series.³

Six years after the discovery of the HB surface antigen, Feinstone and co-workers found viral particles in the stool of a patient with infectious hepatitis. The isolation of serum antibodies to hepatitis A (HA) quickly followed and now provides a quick and convenient test with which to diagnose HA.²

The availability of specific serologic tests for HA and HB revealed the surprising information that many patients with hepatitis had no evidence of either HA or HB. Nor did they appear to have other known causes of hepatitis, for example, cytomegalovirus, herpes virus, Epstein-Barr virus, or toxoplasmosis. This led to the recognition that a third form of viral hepatitis exists, currently referred to as Non-A Non-B hepatitis (NANB).²

HEPATITIS A

The Agent

In contrast to HB, HA is smaller (27 nanometers) and contains RNA rather than DNA. It probably belongs to the picornavirus family which also includes the echo, coxsackie, and polio viruses.^{2, 4}

Transmission

Infection occurs almost exclusively by the fecal-oral route. A high percentage of cases are anicteric and subclinical. The frequency of antibodies to HA in the population decreases with increasing socioeconomic status, apparently due to differences in sanitation and personal hygiene, and increases with increasing age. The patient is most infectious during the 2- to 6-week incubation period when large quantities of virus are shed in the stool. Three to five days after the appearance of symptoms or clinical jaundice, the virus can no longer be recovered from the stool. There is only a transient stage of viremia, and there is very little risk of transmission by blood or blood products.^{2, 4}

Diagnosis

Because of the brief period of viremia, viral antigen is not detected in serum. The virus can be detected in stool only during the presymptomatic stage of the illness, and even then requires immune electron microscopy, a technique available in only a few research labs.

This information for Iowa physicians is furnished and sponsored by the University of Iowa Hospitals and Clinics.

Antibody to HA can be readily detected in serum by the time of clinical illness. However, because of the high frequency of prior infection, many patients will have pre-existing antibody to HA. In order to make the diagnosis of acute HA, one must demonstrate the presence of the IgM class of antibody to HA. This class of antibody appears early in an infection and falls rapidly with clearing of the infection, whereas the later rising IgG antibody is more long lived. Fortunately, standard kits are now available to measure IgM antibody to HA.⁴

The Disease

Differentiating HA from other forms of acute hepatitis is of more than academic interest because HA has a much more benign prognosis.^{2, 4} Although it is responsible for a great deal of epidemic hepatitis and 20 to 40% of sporadic community-acquired hepatitis,⁵ HA rarely results in fulminant hepatitis (~1/1000 cases) and has not been shown to produce chronic active hepatitis or cirrhosis.⁴ Because there is no chronic carrier state and man is the only usual vector in nature, the reason for its perpetuation appears to be the high frequency of anicteric infection. In underdeveloped countries with poor public sanitation, up to 90% of children have had HA by age 10.⁴ In other countries, for example, the United States, childhood rates of infection are lower but continue to rise with age so that about two-thirds of the population will have antibodies to HA by the age of 50.

Prevention of HA

Passive Prophylaxis — Even before the virus of HA had been identified, it was clear that human immune serum globulin (ISG) was effective against HA. If it is given prior to exposure, ISG will prevent the acquisition of HA. When it is given after exposure, it will attenuate the infection to a subclinical, anicteric one. The currently recommended dose is 0.02 ml/kg body weight given intramuscularly or subcutaneously. A convenient approach is to give 0.5 ml to those weighing < 50 pounds, 1.0 ml to those between 50 and 100 pounds, and 2.0 ml to those > 100 pounds. Prophylaxis is recommended for those having close personal contact with persons exhibiting acute HA (household, institutional, and prison contacts). School contacts should only be treated during epidemics. Limited exposure, such as occurs on a hospital ward or in an office, does

not require prophylaxis. Individuals traveling to a tropical or developing country who do not already have antibodies to HA should receive ISG prior to traveling and again in 4 to 6 months if they stay for an extended period of time. Workers with nonhuman primates should also receive ISG every 4 to 6 months.^{6, 7}

Adverse reactions to ISG are uncommon, averaging about 1%, and include pain and hematoma at the injection site, arthralgias, urticaria, rash, and unexplained fever. One VA study found a similar frequency of such mild reactions in patients receiving ISG or placebo injections.⁸ Allergic reactions are more common in children with IgA deficiency. Toxic reactions are much more common if ISG is given intravenously instead of by the recommended intramuscular or subcutaneous routes.⁷

Active Immunization — HA can be passaged in marmosets and in tissue culture. Efforts are currently under way to develop a vaccine from these materials but such a vaccine will not be available for some time and, due to the relatively benign nature of HA, its use will probably be limited to those at high risk when it does become available.

NANB HEPATITIS

The Agent and the Disease

In contrast to HA and HB, no convincing agent or antigen/antibody system has yet been described for NANB hepatitis.^{2, 9} Evidence is accumulating that there are at least 2 different agents of NANB hepatitis. One behaves much like HA and has been implicated as the causative agent in several epidemics of hepatitis due to contaminated water supplies. In addition, NANB hepatitis now accounts for 90 to 95% of all posttransfusion hepatitis. The agent(s) in the latter infection behaves much like HB but the incubation period ranges from 2 to 22 weeks suggesting the possibility of more than one agent. As many as 30% of posttransfusion NANB hepatitis cases become chronic with some resulting in chronic active hepatitis and cirrhosis. Presumably, a chronic carrier state also results and serves as the reservoir for posttransfusion NANB hepatitis. NANB hepatitis also accounts for almost 50% of fulminant viral hepatitis cases in the United States and about 50% of non-B community-acquired acute viral hepatitis.^{2, 9}

(Please turn to page 118)

STATE DEPARTMENT/ PUBLIC HEALTH

HEALTH CARE QUALITY IN IOWA NURSING HOMES

DURING THE 60's and early 70's, when older Americans were seeking nursing home care in an increasing number, news media reports deplored the incidence of resident abuses or the otherwise poor quality of health care services some homes were alleged to provide. These allegations were investigated extensively and led eventually to a promulgation of tougher rules and regulations.¹ It must be added, however, these earlier allegations and indictments resulted from isolated investigations in selective areas of personal and health care and do not represent a generalization based on comprehensive and systematic data. Little was known one way or another how poorly (or well) nursing homes cared for their residents. This was due mostly to the fact that nursing home care or long-term care (LTC) was a relatively new concept in the United States and in part to a difficulty in conceptualizing and empirically measuring the quality aspects of health care and care outcomes.² The legislative and regulatory bodies at federal and state levels were busy regulating what one might call the inputs (e.g., staffing) and the processes; and the state administrative courts

were busy with litigatory action brought by the enforcement agencies. Generally, the health planners, the LTC policy makers, and the public were left in the dark about the quality aspects of health care in nursing homes.

In an effort to address the need for data on health care quality, the Iowa State Department of Health recently developed an outcome-oriented survey method, and has implemented it on an experimental basis.³ With acknowledged imperfections in the survey tool and the problems in its first-year application, we still have a glimpse of health care quality that Iowa nursing home residents are receiving. A few highlights from the survey, (conducted between September 1980 and May 1981) are reported here. The survey covered 278 intermediate care facilities (ICF) and a sample of approximately 2,800 nursing home residents, or about 10 residents randomly selected from each facility.

The survey is designed to gather on an ongoing basis health care information on over 150 items, from inspection of the building structure to resident record files and from interviews with nursing home staff and residents. Table 1 is a summary of the data on four broad aspects of nursing care — health care, food service, and living environment as broken down by the organizational status, whether proprietary or nonprofit.

HEALTH CARE ASPECTS

As the Table I shows, the ICF's in Iowa are providing sufficient staff hours for their residents — 2.2 hours per day for each resident — which is above what the Iowa Administrative Code of Health (Chapter 58) prescribes. The Code requires the ICF to provide a minimum of 1.7 staff hours. It is not surprising, therefore, to find the ICF's generally doing a satisfactory job in providing the various nursing and personal services required by law. According to the survey, the average ICF is meeting more than 99% of the required services. Except for a few exceptional cases, the IFC residents are getting all required personal and nursing services as they are needed.

Not so rosy, however, is the picture for the professional and technical aspects of health care. For most of these facilities, health care planning (or overall care plan) for the residents is far from satisfactory completion. The Code requires the ICFs to prepare an overall care

The present article is an extraction from Yong S. Lee, *Health Care Quality in Iowa Nursing Homes: Results from the Outcome-Oriented Survey, 1980-1981*, Iowa State Department of Health, 1981.

This information on public health matters is furnished and sponsored by the Iowa State Department of Health.

TABLE I
SELECTED HEALTH CARE RESULTS IN IOWA LONG TERM FACILITIES

Service Areas	Proprietary facilities (N = 197)	Nonprofit facilities (N = 81)	Overall average (N = 278)
HEALTH CARE			
Stoffing (Hrs. per resident per day)	2.1	2.6	2.2
Core planning (% of completion)	53.2	55.4	54.0
Core review (% of adequate review)	56.3	62.0	58.0
Medication (% of implementation)	83.0	84.4	83.5
Treatment (% of implementation)	88.9	91.7	91.4
Diet (% of implementation)	83.0	82.1	82.6
Nursing services as required (%)	99.3	99.7	99.4
FOOD SERVICE			
Blended (satisfactory menus for 7 days)	5.9	6.2	6.0
General (satisfactory menus for 7 days)	6.7	6.8	6.8
Sodium restricted (satisfactory menus for 7 days)	6.3	6.5	6.4
Diabetic (satisfactory menus for 7 days)	6.2	6.3	6.3
LIVING ENVIRONMENT*			
Resident room conditions	4.2	4.4	4.3
Dining, kitchen, food storage	4.3	4.4	4.3
10 other public areas	4.0	4.3	4.1

* The quality of living environment is measured using a five-point scale with "1" being considered as poor and "5" as excellent.

plan for each resident, based on specific problems identified, in an interdisciplinary manner, and with the goals set in realistic terms. Of approximately 2,800 residents, the survey shows only 54% of them have care plans which are satisfactory. About 2.5% of these residents were found to have no care plans. Similarly, the ICF's appear to be doing somewhat a haphazard job in reviewing the health care progress of their residents. Only 58% of the sampled residents were found to have their health status reviewed at an acceptable level. The law requires the reviews on a quarterly basis.

The survey also shows a substantial number of discrepancies exist in the resident's record files as to the implementation of physician-prescribed medication, treatment, and diet schedules. The highest discrepancies are found in diet implementation with 17.4% of the sampled residents showing either minor or major discrepancies; next is medications with 16.5% discrepancy, and finally in treatment with 8.6%. Not evident from the data is why the ICF's show so much discrepancy in professional health care when they budget sufficient staff resources. Without the data one may only speculate on several plausible hypotheses, including the staff utilization, the quality of in-service training, and traditional emphasis of

the Health Department on the input and procedural compliance, and not on the care outcomes and quality.

FOOD SERVICE

Realistically, no one would expect nursing home residents to be any different from the college students in a dormitory, as far as the food is concerned; they eat and grumble. The survey, therefore, is not designed to learn how the residents like their food but to find if the facilities are providing the basic nutritional requirements for their residents (i.e., milk, meat, vegetables and fruits, bread and cereal). The inspection of a week's menus shows that most facilities have satisfactory menus for the general meals but show a less than satisfactory performance in the categories of the blended, the sodium restricted, and the diabetic. Of seven days there is about a day's menu which is considered to be not planned satisfactorily.

LIVING ENVIRONMENT

"In olden days," a state surveyor once commented to me, "some nursing homes were like pits. Today, most nursing homes are clean and respectable." The survey results seem to agree with this assessment. As a means of assessing the physical conditions of the residents' living environment, the surveyors inspected the in-

January 1982 Morbidity Report

Disease	Jan. 1982 Total	1982 to Date	1981 to Date	Most Jan. Cases Reported From These Counties
Amebiasis	8	8	0	Johnsan, Palk, Woodbury
Brucellosis	0	0	0	
Chickenpox	895	895	1358	Linn, Dubuque, Palk
Cytomegalavirus	0	0	2	
Eaton's Agent infection	25	25	3	Palk, Scatt, Clinton
Encephalitis, viral	0	0	1	
Erythema infectiosum	18	18	163	Scatt, Pottowattamie
Gastroenteritis (GIV)	1070	1070	3000	Linn, Palk, O'Brien
Giardiasis	5	5	6	Scattered
Hepatitis, A	8	8	34	Muscatine
Hepatitis, B	6	6	7	Palk
Hepatitis type unspecified	0	0	5	
Hepatitis Non A, Non B	1	1	0	Linn
Herpes Simplex	26	26	8	Clinton, Johnsan, Palk
Herpes Zoster	0	0	1	
Histoplasmosis	6	6	3	Marshall
Infectious mononucleosis	24	24	32	Black Hawk, Linn
Influenza, lab confirmed	0	0	32	
Influenza-like illness (URI)	3786	3786	12175	Pola Alta, Linn, Johnsan
Meningitis aseptic	3	3	6	Cerro Gorda, Linn, Mitchell
bacterial meningococcal	15 1	15 1	17 4	Palk, Clinton Palk
Mumps	5	5	8	Linn
Pertussis	0	0	0	
Robies in animals	28	28	55	Mahaska, Webster, Woodbury
Rheumatic fever	1	1	1	Davis
Rubella (German measles)	0	0	0	
Measles	0	0	0	
Salmonellosis	10	10	12	Scattered
Shigellosis	3	3	9	Linn
Tuberculosis total ill	3	3	9	Clinton, Hardin, Woodbury
bact. pas.	3	3	9	Clinton, Hardin, Woodbury
Venereal diseases: Gonorrhea	314	314	382	Palk, Scatt, Black Hawk
Syphilis	0	0	1	

Laboratory Virus Diagnosis Without Specified Clinical Syndrome: Adenovirus — 2, Johnsan, 1, Palk, 1, Woodbury; Guillain Barre — 1, Palk; Legionnaire's Disease — 1, Lee, 1, Scatt, 1, Webster; Ascariasis — 2, Johnsan; ECHO virus — 1, Scatt; Typhoid Fever — 1, Black Hawk; Campylobacter — 1, Appanaase, 4, Dubuque, 3, Johnsan, 1, Louisa, 1, Lucas, 5, Polk, 1, Wapella, 1, Webster.

STATE DEPARTMENT/PUBLIC HEALTH

(Continued from page 115)

dividual resident's rooms; dining, kitchen, and food storage areas; and other public areas, such as yards, buildings, utility rooms, laundry areas, and central bathing areas. Based on the general cleanliness, orderliness, and maintenance conditions, these places were rated by the surveyors on a 5 point scale with "1" being poor and "5" excellent. As Table I indicates, the ICF's appear to maintain a quality living environment. The scores indicate that overall, the facilities are rated good in their physical and maintenance status.

CONCLUSION

Because of space limitations, only a cursory overview of the survey data is presented. We have focused on a few selective dimensions of health care. Wading through the data, a few generalizations are nonetheless possible. Overall, Iowa ICF's appear to be doing well in providing a sufficient number of nursing staff, meeting the required nursing and personal services, and providing a generally clean living environment, all of which are a significant departure from the impressions of the 60's and the early 70's. The ratings are not so high, however, in such professional care areas as health planning, progress review, medication, treatment, and dietary implementation. Future efforts may need to be concentrated on these professional service areas if the nursing homes are to gain greater public confidence. Finally, the data gives an impression that in a majority of the care areas, the small proprietary facilities show consistently lower performance ratings than their counterparts in the non-profit sector. The administrators and the professional staff in these facilities may have to make additional efforts to maintain pace with the rest of the ICF's in Iowa.

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1. U.S. Senate Subcommittee on Long-Term Care, *Nursing Home Care in the United States: Failure in Public Policy*, Washington, D.C.: U.S. Government Printing Office, 1974.
2. Ruth M. Covell, "The Impact of Regulation on Health Care Quality," pp. 111-125, in Arthur Levin, M.D., editor, *Regulating Health Care*, New York: The Academy of Political Science, 1980.
3. Yong Lee and Steve Braun, "Health Care for the Elderly: Designing a Data System for Quality Assurance," *Computers, Environment, and Urban Systems*, Vol. 6, No. 2, 1981, pp. 59-82.
4. The survey also included the measures related to the resident demographic and health characteristics, staff training and development, social service, individual and group activities, and resident satisfaction.

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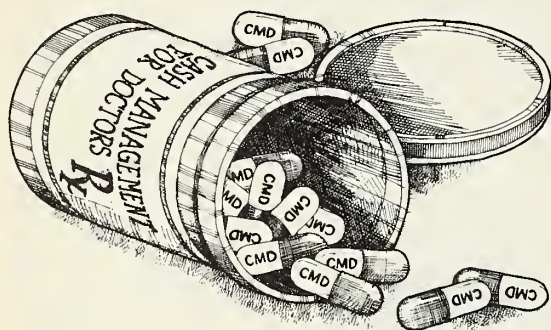
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DRUG THERAPY REVIEW

(Continued from page 113)

Transmission and Diagnosis

Little can be said about transmission except that certain agents of NANB hepatitis are clearly transmitted via blood products and accidental needle sticks, whereas the fecal-oral route and contaminated water have been implicated in other infections. Because there is no direct test for NANB hepatitis, diagnosis is by exclusion after eliminating HA, HB, CMV, EBV, herpes, and toxoplasmosis infections.

Prevention

No information is available concerning post-exposure prevention of disease. However, preexposure use of ISG appeared to attenuate posttransfusion hepatitis and prevent its progression to chronic hepatitis.^{10, 11, 12} For accidental needle stick exposure, 0.06 ml/kg body weight of ISG appears to be appropriate treatment until more information is available. For nonparenteral exposure, prophylaxis for HA is recommended. No active immunization will be possible until the infectious agents are isolated. — Douglas R. LaBrecque, M.D., Assistant Professor of Medicine

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ABOUT IOWA PHYSICIANS

Dr. John F. Hess has been named president of the medical staff at Mercy Hospital in Cedar Rapids. **Dr. Thomas Schueller** was named vice president and **Dr. Leland Hawkins**, secretary-treasurer. All are CR physicians.

Dr. Nelson Chesney recently began a solo family practice in Bettendorf. Dr. Chesney received the M.D. degree at U. of I. College of Medicine and interned at Maricopa County General Hospital in Phoenix, Arizona. Prior to locating in Bettendorf, Dr. Chesney was associated with Winterset Medical Associates. . . . **Dr. Ronald Lemmons**, Estherville, was

named a fellow of the International College of Surgeons at the group's recent annual meeting in Coronado, California. . . . **Dr. Kenneth Lister**, Ottumwa, recently was honored by the medical staff of the Jefferson County Hospital in Fairfield. A special plaque was presented to him on behalf of the hospital board and staff in appreciation of his 30 years of service to the hospital. Dr. Lister is a former IMS president; diplomate of the American Board of Surgery and a fellow of the American College of Surgery. He began his practice of surgery in Ottumwa in 1948, retiring in 1981. **Dr. Frank R. Richmond, Sr.**, Fort Madison, recently was featured in a newspaper article citing his 61 years in the practice of medicine. Dr. Richmond received the M.D. degree at U. of I. College of Medicine and interned at Cook County Hospital in Chicago. He began his medical practice in Fort Madison in 1920. His son, **Dr. Frank R. Richmond, Jr.**, joined him in 1953. Dr. Richmond still makes house calls; takes medical refresher courses and has no intention of slowing down.

(Please turn to page 120)



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A husband-wife team, **Dr. James Kannenberg** and **Dr. Kathy Anderson**, will begin family practice in Fort Madison in July. Dr. Kannenberg and Dr. Anderson received their M.D. degrees at the University of Wisconsin School of Medicine and had their family practice residencies at the Lutheran Medical Center in St. Louis, Missouri. . . . **Dr. Charles Breeding** will begin family practice in Paullina in August. Dr. Breeding received his M.D. degree at Creighton University School of Medicine in Omaha, Nebraska and is completing his family practice residency at the University of Texas Medical Branch at Galveston, Texas. . . . **Dr. Joseph E. Rose**, Grundy Center physician for over 50 years, closed his medical practice in December. Dr. Rose received the M.D. degree at the U. of I. College of Medicine and interned at the U. S. Marine Hospital in New Orleans, Louisiana. He began his medical practice in Grundy Center in 1931. Dr. Rose is a past president of the Grundy Center School Board; past president of the Grundy County Memorial Hospital medical staff and a life member of the

Iowa Medical Society. . . . **Dr. Douglas E. Vickstrom**, Davenport, **Drs. Kenneth A. Hubel, John B. Stokes, III, and John M. Weiler**, all of Iowa City, and **Dr. Jaleel Y. Siddiqui**, West Des Moines, have been named fellows of the American College of Physicians. . . . **Dr. Timothy Thomsen**, Mason City, was guest speaker at the January meeting of the Wright County Medical Society. Dr. Thomsen spoke on "CA of the Esophagus."

Dr. Preston E. Gibson, Davenport, recently retired from his pediatric practice. Dr. Gibson received the M.D. degree at the U. of I. College of Medicine and served his pediatric residency at both Los Angeles Childrens Hospital and Long Island College of Medicine in New York City. He began practice in Davenport in 1935. A life member of the Iowa Medical Society, Dr. Gibson is also a past president of the Scott County Medical Society; Mercy Hospital

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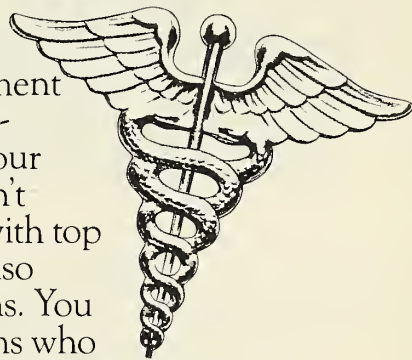
medical staff; and the Iowa Pediatric Society. . . . **Dr. Frederic M. Ashler**, Hamburg, recently was appointed to the Commission on Health Care Services of the American Academy of Family Physicians. . . . **Dr. David J. Lofgren** recently began family practice in Creston. Dr. Lofgren received the M.D. degree at the University of Minnesota School of Medicine and completed his family practice residency in Cedar Rapids. Prior to locating in Creston, he practiced in Horicon, Wisconsin. . . . **Dr. Philip H. Kohler** has been named president of Iowa Lutheran Hospital's medical staff in Des Moines. Other officers include — **Dr. William R. Boulden**, president elect; **Dr. Rodney R. Carlson**, secretary; and **Dr. Robert T. Brown**, treasurer. All are Des Moines physicians. . . . **Dr. Wayne E. Rouse**, Boone, recently was appointed to the Commission on Public Health and Scientific Affairs of the American Academy of Family Physicians. . . . **Dr. Dennis Rajtora** was elected president of the Finley Hospital medical staff in Dubuque; **Dr. James Voelker** is president-elect and **Dr. Thomas Lally** was re-elected secretary-treasurer. All are Dubuque physicians.

DEATHS

Dr. Charles Edwards, Sr., 79, widely known Council Bluffs physician, died December 26 following a lengthy illness. Dr. Edwards received the M.D. degree and took an obstetrics and gynecology residency at Creighton University Medical School in Omaha, Nebraska. A co-founder of the Cogley Clinic in Council Bluffs, Dr. Edwards was on the staff of both Mercy and Jennie Edmundson hospitals. He was the first president of Iowa Medical Service (Blue Shield) invited to serve additionally on the Blue Cross board of directors. A lifelong resident of Council Bluffs, Dr. Edwards was president of the Iowa Medical Society in 1964; and from 1957-1958 served as Speaker of the IMS House of Delegates. He also was president of the Mercy Hospital medical staff; Pottawattamie County Medical Society and Iowa Obstetrical and Gynecological Society. He was a member of the American College of Obstetrics and Gynecology and the International College of Surgeons. Among the survivors is Dr. Charles Edwards, Jr., a Council Bluffs physician.

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Dr. Van C. Robinson, 74, Des Moines, died January 6 at Iowa Methodist Medical Center. Dr. Robinson received the M.D. degree at Northwestern University School of Medicine in Chicago, Illinois; and interned at Iowa Methodist Medical Center, where he later served as chief of staff. In addition to his private practice, Dr. Robinson was a company physician for the Des Moines Register and Tribune Company for 34 years, Meredith Corp., American Mutual Life Co., and Home-steaders Life Insurance Co.

Dr. Walter R. Fieseler, 87, died December 25 in Largo, Florida. Dr. Fieseler received the M.D. degree at the U. of I. College of Medicine. Following completion of his internship and residency at the U. of I., he served on the staff of the U. of I. Department of Urology. He was also a member of the staff at the University of Southern California from 1938 to 1941. Dr. Fieseler practiced in Fort Dodge from 1941 until his retirement in 1962. Prior to moving to Florida, he lived in Okoboji.

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In The Public Interest



IMS PR Has Three C's

CONSIDERATION! COURTESY! COMMUNICATION!

In January the Iowa Medical Society Public Relations Committee got together. The talk covered several topics. But it centered a lot on how the physician relates. Relates to what?

Mainly, how the physician relates to his/her patients.

But also how he/she relates to his/her employees. And how they (the employees) in turn, relate to the patients.

Not surprisingly, the IMS PR Committee members dissected the profession a bit. *Does the physician really know how well (or how poorly) his/her office staff is functioning when it comes to the three introductory words?*

Again, not surprisingly, the Committee consensus went something like, "Many probably do, but the proposition is one so important it needs constant attention." From the employee who answers the first phone call of the day to the one who locks the office door at night (and it may be the same person), these elements of *consideration, communication and courtesy* should be flashing lights in the mind.

It is an unparalleled truth that the individual sitting in the doctor's reception area has untold emotions tugging at his shirtsleeve. *Worry. Tension. Uncertainty. Pain. Anxiety.* These and more. The same is true of patients calling the doctor's office for advice and instructions.

And the challenge in responding to these human needs is probably as great as any across the spectrum of personal relations. How does an office nurse or medical assistant deal with a roomful of patients and a barrage of phone calls at a time when the doctor is delayed by an emergency?

The tone for operations in an environment such as this — and even the calm periods — is or should be set by the physician or physicians

in charge. The clarity of policy established and expected by these physician employers will tell the tale very often as to whether that particular practice has a reputation for consideration, communication and courtesy. These are not functions to be taken for granted; they must be monitored regularly.

So said the IMS PR Committee, whose veteran physician members easily surpass 150 years of successful medical practice. They agreed it starts with the doctor. The need is obvious to treat patients with tact, respect, compassion and professionalism. From there the staff permeation process takes over through example and direction.

"You'd better know," they agreed, "how your receptionist is handling patients on the telephone. You'd better know if conscientious efforts are being made to handle the inconvenience caused by unavoidable delay. And be sure to avoid the avoidable delay."

Reflecting on the subject a little more deeply, they wondered, "Is good public relations a series of intuitive positive responses? Or is it learned from books, workshops, programs and experts?" No doubt, they concluded, it is a bit of all, in different blends.

These informal musings by four Iowa physicians (out of an 8-member committee) may not offer strikingly new commentary for the annals of public relations. But what they said rings true and self-evident. Treating people with courtesy and consideration — whether they're clients, customers, constituents, or most importantly, patients, is really what living is all about.

March 1982

Journal of the Iowa Medical Society

The Dean's Preview

JOHN W. ECKSTEIN, M.D.
DEAN, COLLEGE OF MEDICINE

ONCE AGAIN we welcome this opportunity to bring word to our professional colleagues about several aspects of medical education. We are grateful to Editors Alberts and Neumann for their continued interest in news from the University of Iowa College of Medicine, and for the care which they devote to its presentation.

Readers of this issue of the JOURNAL may be brought up to date on the current freshman class in medicine, and the new, revised and restructured preceptorships with Iowa practitioners.

A major report on some interesting trends in medical manpower in our state is provided by Dr. Paul Seebom, known to most JOURNAL readers as a recent president of the Society. The Office of Community-Based Programs, which Dr. Seebom directs for the College of Medicine, contributes in many ways to Iowa's greatly improved physician supply and distribution picture.

Most Iowa practitioners should find good news in Dr. Francois Abboud's answers to the JOURNAL's questions about the new Cardiovascular Center which we will dedicate late next month. Many will benefit directly from research which the Center will make possible, and even more will benefit from the new Center's continuing education programs.

THE JOURNAL's feature on some of University Hospitals' pediatrics patients does more than brighten the pages of a professional publication — it shows an interesting effort to make hospital life more bearable than it might



otherwise be for youngsters uprooted from their home environments.

Again this year the JOURNAL offers its "Directory of Clinical Services at The University of Iowa," which may easily be removed from the magazine and filed for ready reference in conversations with patients and families. Several thousand other copies of the Directory will be distributed to health, educational, judicial and social service practitioners throughout the state, for their use in counseling Iowans with a variety of problems. Many favorable comments have been received in the past from these sources concerning the Directory, and for the Society's help in making it available statewide.

FINALLY, I would call your attention to this month's *In the Public Interest* article, which deals with a matter of considerable importance to the College of Medicine — and which will prove useful as background for any discussion which IMS members might find occasion to have with their state legislators.

We are pleased to be so well represented in the JOURNAL, and to have the continued privilege of working with so many members of the Iowa Medical Society and its staff. Such contacts do many good things for all of us — faculty, students and support staff.

GMENAC And Medical Manpower in Iowa

PAUL M. SEEBOHM, M.D.

Iowa City

IT HAS BEEN over 2 years since the Graduate Medical Education National Advisory Committee (GMENAC) so dramatically revealed its findings that the shortage of doctors in the seventies was precipitously converting into a surplus for the eighties and a veritable "glut" for the nineties. The announcement has generated literally thousands of pages of commentary from professional societies, educational institutions and the press. Much of what has been said and written has been politically and emotionally inspired rhetoric depicting great alarm over the effect on American medicine at one extreme to a denial that a surplus will exist in the '90's at the other. Fortunately, cooler and more analytical heads, although in the minority, have emerged with more rational assessments and implications of the current trends in physician manpower production.

It has been pointed out that the physician marketplace, like other economic marketplaces, has two components: a *supply* side and a *demand* side. These components are best known for their influence on price. When supply is low and demand is high, the price is high. Conversely, when the supply is high and the demand low, the price is low, and when it falls below the cost of supply — supply falls. In the case of medicine, supply and demand translates into the number of physicians and the needs of patients for medical services. The law of supply and demand rarely is allowed to

No surplus in Iowa physicians is indicated from this discussion of medical manpower production and movement. Indications are that Iowa is moving down an intelligent path in its quest to provide adequate new and replacement manpower for its population.

operate in a free marketplace, and the medical marketplace is no exception. Third party reimbursement methods of payment have virtually eliminated the impact of the balance of supply and demand on price. For example, the ever-increasing number of empty hospital beds developing in the past decade, instead of reducing hospital rates as the law of supply and demand would dictate, has been associated with a meteoric rise in the price of daily hospital rates. A similar course, to a lesser degree, has been followed by physicians' fees. With more physicians becoming available, patients do very little shopping around for the best price when the Blues, Medicare, Medicaid or other insurance carrier have agreed to pay the bill. As a result, cut-rate physicians have yet to appear, at least in the highly insured hospital setting.

More controversial than the interference of third party payment is whether physicians in oversupply — simply by their presence — create their own demand and thus violate the law of supply and demand in the marketplace. As new physicians have entered physician shortage areas, they have been instantly busy without detracting from the practice of other physi-

Dr. Seebohm is executive associate dean of the University of Iowa College of Medicine.

cians in the area. This had been interpreted by some to mean that physicians create their own demand whether they are needed or not. Recent studies,¹ however, show this is not the case, at least for hospital inpatient and outpatient utilization. In fact, increasing the number of young physicians to a community may decrease utilization and even compete with hospitals by providing outpatient ancillary services in the private office setting. These observations certainly suggest the marketplace is still inherently free to adjust to a degree to supply and demand.

The GMENAC report tried to predict the state of the medical marketplace by analyzing the physician supply and matching it with the projected future demand for physician services in 1990. When it found supply exceeded demand, the Committee recommended measures that would reduce the supply. One thing is indisputable about the report and that is the supply side data. It is accurate and a fact that in 1990 there will be at least 550,000 physicians in this country. The reason one can be so certain of this number is because it is based on the number of medical students already in or committed to be in the medical school-residency pipeline, and life expectancy tables for physicians now in practice.

The principal problem with the GMENAC forecast is the *demand* side of the report. Future demand was based on the projection of disease incidence data, the consensus of specialty panels and economic modeling methodology. In contrast to the supply data, demand was based on opinion rather than actual numbers, and as such has been most vulnerable to rational analysis. Disease patterns and technological advances, having changed radically in the past decade, could be expected to continue at the same pace in the next. It is probable no one will know what the demand for medical services will be in 1990 until that year arrives. Until then we will all have to deal with the GMENAC speculation even though we may not want to believe it.

IOWA AND GMENAC

With a supply of 550,000 physicians in 1990 the GMENAC demand data suggests a surplus of 70,000 physicians, and if Iowa were to share in the total number of physicians in the country at its current rate of 0.7 percent, there will be 3,850 ($.007 \times 550,000$) physicians practicing



Paul M. Seebohm, M.D.

here in 1990. In 1980, there were 3,225 physicians in Iowa, so the GMENAC projection would mean a net gain of 625 physicians in the next decade.

How likely is it that Iowa will have 3,850 physicians in 1990?

The Iowa Physician Information System in the Office of Community-Based Programs in the College of Medicine, which, under the

TABLE I
GAIN IN PHYSICIANS IN IOWA 1977-1980*

	Entered	Left	Net Gain
1977	242	170	+ 72
1978	243	165	+ 78
1979	241	169	+ 72
1980	<u>232</u>	<u>161</u>	<u>+ 71</u>
	958	665	+ 293

* M.D.'s and D.O.'s of All Specialties.

leadership of Roger Tracy and Bruce Brenholdt, has been monitoring the number and distribution of physicians in Iowa, projects an increase in population of physicians similar to that of GMENAC. The information system, computerized since 1976, provides very accurate data on the number and turnover of physicians in Iowa. Table I shows physicians entering and leaving practice as well as the current

TABLE II

Year	Iowa Population	No.	Physicians		
			IPIS	GMENAC	
				No.	Phys./Pop. Ratio
1980	2,913,387	3225	111/100,000	3225	111/100,000
1990	3,001,706	3957*	131/100,000	3850*	128/100,000

* Projection.

rate of net gain (73 per annum) for the years 1977-1980.

The trend over the past 5 years has been remarkably constant, and if projected over the next decade will result in 3,957 physicians by 1990 (Table II). So, indeed, the GMENAC supply side numbers for Iowa parallel the projections derived from the current trend data of the Iowa Physician Information System (IPIS)

TABLE III

Type of Graduate	Number	Percent
Medical (M.D.'s)		
U.S. Medical Graduate	2394	74.4%
Foreign Medical Graduate	447	13.9%
Osteopathic (D.O.'s)	375	11.7%
	3216	100.0%

TABLE IV

PHYSICIANS ENTERING PRACTICE IN IOWA AFTER MEDICAL
EDUCATION OR GRADUATE TRAINING ASSOCIATED WITH THE
UNIVERSITY OF IOWA

Iowa-Based Allopathic Education/Training vs. Other Sources
(January, 1982)

Source of Education/Training	Entered Practice During 1977-81	Percent of All Entries
Physicians with Iowa-Based Allopathic Education and/or Training	527	44%
Allopaths (M.D.'s) with No Iowa Education or Training	533	44%
Osteopaths with No Allopathic Education or Training	119	10%
Osteopaths with Non-Iowa Allopathic Training	27	2%
	1,206	100%

for the next decade. The next critical question for Iowa is whether this supply will match or exceed the demand for medical services in 1990. By that time, the population of Iowa, growing at a 3.1% rate, will be 3,001,706.

The 131/100,000 physician-to-population ratio will be higher than now exists in Iowa, but will still be below the national average of 134/100,000 20 years ago, and well below the over 200/100,000 currently existing in the Northeast and on the West Coast. Such comparisons suggest Iowa will not have physicians in surplus in 1990.

There is a tendency to think of the physicians in a given geographical area as being fixed, but in actual fact the physician population as a group is quite dynamic. In the past 5 years over 1,000 physicians entered practice in Iowa while over 800 left. The infusion of new physicians is more than a simple exchange of one doctor for another. The new physicians differ in age, sex mix, practice style, and specialty skills from the older physicians they replace. These differences bring about changes in medical practice that in themselves effect demand. For example, the 1,200 open heart operations performed in Iowa in 1977 doubled in 1981. It took new physicians entering practice in different communities to bring this about, and is a highly visible sample of only a small part of the influence on medical practice generated by the progressive physician turnover of the profession.

Currently, the medical profession in Iowa is made up of three types of medical graduates: foreign medical, U.S. medical, and osteopathic (Table III).

The University of Iowa College of Medicine, through its undergraduate and sponsored residency programs, is the principal supplier of physicians in the State of Iowa. One thousand

TABLE V
PHYSICIANS ENTERING PRACTICE IN IOWA AFTER MEDICAL EDUCATION OR GRADUATE TRAINING
ASSOCIATED WITH THE UNIVERSITY OF IOWA
Five-Year Practice Entry Study
(January, 1982)

Combinations of Iowa Education/Training	1977	1978	1979	1980	1981*	Five-Year Totals
Medical College (only)	26	32	26	22	20	126
Medical College and Residency	36	38	34	44	46	198
Medical College, Residency, Fellowship	3	4	6	1	4	18
Medical College and Fellowship	0	2	5	2	1	10
Residency (only)	30	37	24	26	16	133
Residency and Fellowship	5	4	3	3	5	20
Fellowship (only)	<u>4</u>	<u>1</u>	<u>6</u>	<u>6</u>	<u>5</u>	<u>22</u>
	104	118	104	104	97	527

* Figures for 1981 will increase before the 1981 report is closed March 31, 1982.

five hundred and forty-eight Iowa physicians have had all or part of their education in College of Medicine programs. With new restraints on immigration of doctors, it is probable the percentage of foreign medical graduates will fall as the current FMG physicians retire and are replaced by U.S. medical graduates and/or osteopaths.

UNIVERSITY OF IOWA COLLEGE OF MEDICINE AND GMENAC

In the past 5 years, of the 1,206 physicians entering practice, 527 (44%) had graduated and/or trained in College of Medicine programs. Another 533 (44%) M.D.'s came from outside Iowa. The remaining 146 (12%) were osteopathic physicians from Iowa and non-Iowa educational programs. (Tables IV & V)

The enrollment at the University of Iowa College of Medicine produces around 175 physicians a year. This figure is very close to the number of physicians who leave practice each year. The characteristic mobility of physicians which causes Iowa to lose graduates also accounts for the significant in-migration of physicians not only for residency training, but to locate for medical practice.

The net gain of physicians each year shows clearly the M.D. shortage of the sixties has been turned around in Iowa, and the many programs instituted by the University in the early seventies to keep more doctors in Iowa have assisted in a turnabout. Today, Iowa, in-

stead of losing physicians as it was in 1970, is gaining physicians at the rate of over 70 a year, in spite of the fact that physicians leaving practice in Iowa have increased almost 50% in the past 10 years. Older physicians are being replaced by younger physicians in large numbers, and in the past 5 years alone almost 30% of all physicians were replaced in the State of Iowa. The University of Iowa provides the educational base for the production of the largest group of the medical and surgical physicians needed to operate the medical care system of this State, and by graduating a number of physicians equivalent to its losses, is contributing its share to the nation's medical manpower needs. Consistent with the "New Federalism," Iowa, in the area of medical manpower, is prepared to take care of its own.

CONCLUSION

Even at current net gain rates, having 131 physicians per 100,000 in 1990, will not constitute a surplus. That is not to say there is not an excess capacity in medical schools elsewhere that might be modulated to match population growth by 1990. As logical as such a goal might be, without knowing the nature of demand in the next 10 years, it, like the GMENAC report, would be no more than an educated guess.

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Read All About It In 'Kids Komments'

Kids Komments is an unlikely name for a newspaper. But for pediatric patients at University of Iowa Hospitals and Clinics it beats the *Wall Street Journal*, *New York Times* and *Des Moines Register* a hundred times over.

Every two weeks a new edition of *Kids Komments* hits the hospital's newsstands, and copies are snapped up by young patients anxious to see themselves or read the story written by a patient friend.

Kids Komments has been published about 2 years, explains Dean Borg, director of Hospital Information Services. "It began when Paul Behl joined our staff," said Borg. "Paul had published a children's newspaper previously. I thought a newspaper for children in University Hospitals might have some appeal and be of service, too, so I asked him to try it." A University journalism student, Teresa Hunter, Des Moines, is the assistant editor.

Child life therapists help pediatric patients write short stories about themselves, their families, hobbies and often their illnesses. A particularly poignant contribution was this poem by Neil Williams, 11, Danville, Iowa, which appeared in the January 29 issue:

*In the hospital, it's not fun
I'd rather be having fun in the sun.
I hope for a speedy recovery,
but not with the discovery
of a very large tumor.
There is a rumor
that I might die
and go to be with Jesus in the sky.*

The paper contains a listing of the special services for children, e.g., art programs, library, etc. A report by a hospital staff member describes a health profession so the children can understand the work of those who serve them.



Two thousand copies of each issue are printed. In addition to University Hospitals, some copies are mailed to reception rooms of pediatricians in Des Moines, Ames, Cedar Rapids, Iowa City and Davenport.

"Understanding and letting children communicate their points of view to adults and other kids is a key purpose of Kids Komments," says Editor Behl. "We let the children speak frankly about their illnesses, if that's what they want to write about."

FROM KIDS KOMMENTS — These photos have appeared recently in Kids Komments. At left is a happy visit from Walt Disney characters. Below, a pediatrician gives the youthful reporter a chance to listen to heart sounds which he later reports on in the paper. Upper right shows a patient with a volunteer worker; each issue features a hospital worker. Middle right, this pictorial essay covers "Homemade Ice Cream Night." Lower right has a mother and son saying, "I love you" in sign language; including parents adds a family flavor to Kids Komments.



On the New Cardiovascular Center

Francois M. Abboud, M.D., is head of the Department of Internal Medicine and a professor of medicine and physiology in the University of Iowa College of Medicine. He comments on the new Cardiovascular Center, which he directs.

How did the Cardiovascular Center evolve?

ALTHOUGH it has just been completed, the seeds that grew into the new Cardiovascular Center at the University of Iowa College of Medicine were sown back in the 1920s. It was in that period that Dr. Fred Smith, who headed the Department of Internal Medicine, carried out his classic electrocardiographic studies on myocardial infarction in dogs. As a student, Dr. Smith had studied with Dr. James B. Herrick of Rush Medical School, who first recognized coronary artery disease as a clinical syndrome.

From this beginning, a diversity of College departments have nurtured a number of basic and clinical scientists who gained national and international recognition in the area of cardiovascular disease. The research directions they mapped, the scientists and practitioners they trained, and the thousands of patients they cared for, propelled the University of Iowa into a top leadership role in the field. With more than 70 faculty members involved in research, education, and care programs, a decision was made in 1977 to provide a central facility that could help coordinate the large car-

diovascular program that has evolved in recent decades.

What are the purposes of the Center?

THE CARDIOVASCULAR CENTER was created to provide core facilities not provided by federal programs for training, continuing education and research and to act as a coordinating mechanism for cardiovascular programs. Among its objectives are to help the University capitalize further on the strengths and resources already developed; to foster and encourage interdisciplinary research by both basic and clinical scientists, and to create and bolster an interdisciplinary teaching and training environment.

High on the list of the Center's priorities are strengthening and expanding continuing education opportunities for physicians and education programs for patients. The Center's coordinating function also allows us to identify resources of the health center that can be used to support new cardiovascular emphases. It also helps to identify Center resources that can support other major programs with different primary emphases, such as the Diabetes Center, Stroke Center, and major prevention programs.

The new facility is central to a wide range of cardiovascular activities now being conducted by some 70 faculty members in 9 departments throughout the College of Medicine-University Hospitals complex. The purpose is not to house all cardiovascular related research activities in the Center. These will continue to be carried out in the research laboratories of

the departments. The Center provides core research facilities, facilities of new interdisciplinary cardiovascular research programs, and a coordinating mechanism for training and continuing education.

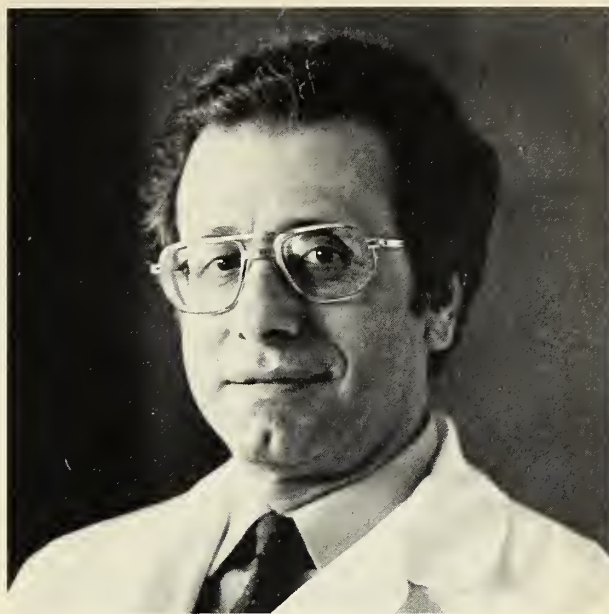
How was the Center's building funded?

HUNDREDS OF faculty, alumni, individual, and corporate friends of the University and the College of Medicine have built the Cardiovascular Center. They provided more than \$2 million to construct the Center, which is located on two new floors of the Medical Research Center in the midst of the Hospital and medical science laboratories complex. Adding to the excellent support which came through a major fund-raising campaign of the University of Iowa Foundation was a major grant from the Pearson Trust, which originated with a bequest from the late Edith King Pearson, Des Moines, following her death in 1963. Her husband, Dr. William Pearson, who died in 1944, was a well-known otolaryngologist. The new addition has research laboratories, faculty and administrative offices, seminar rooms, library and learning resource units.

How will the Center enhance educational programs?

THE CARDIOVASCULAR LEARNING RESOURCE Unit, named after our leading senior cardiologist, Dr. Lewis E. January, will be the focus of increased educational opportunities for medical students, graduate training in cardiovascular research and clinical cardiology, and continuing education for nurses and physicians.

The unit provides advanced electronic aids for visual and audio self-study of cardiovascular problems and characteristics. For example, some medical students have already met "Harvey" and physicians attending future postgraduate education sessions can look forward to checking his heart sounds. Harvey is a mannequin or Cardiology Patient Simulator that realistically reproduces heart sounds and murmurs, movements of the chest wall, respiration, blood pressure, and arterial and venous pulsations. Harvey can simulate bedside findings of essentially unlimited cardiac diseases. Only a few medical centers in the world have this mannequin. The U. of I. is fortunate to



Francis M. Abboud, M.D.

have one through the generosity of the Alcoa Foundation, Pittsburgh, Pa., which provided a \$50,000 challenge grant to the College of Medicine to pay half the cost.

What is the current research focus?

RESearch is focused on four major areas: atherosclerosis, hypertension, stroke, and coronary heart disease. We are seeking answers to how these disorders can be better detected and treated and how, one day, they might be prevented entirely.

In atherosclerosis, studies concern tissue lipids (clinical and cell culture), primate atherosclerosis (regression and vessel wall characteristics), and the role of endothelium and platelets in atherosclerosis and thrombosis (interaction between blood and the vessel wall). Two large clinical studies are also underway — the Coronary Heart Disease Risk Factors in School Children project and the Coronary Primary Prevention Trial.

Among a host of projects being undertaken in research on hypertension are identification of factors influencing the natural history of the disease, new diagnostic approaches, the prevalence and incidence in childhood, and neurogenic control of the circulation. Some of the projects related to heart disease are the molecular arrangement of heart muscle pro-

(Please turn to page 144)

ON THE NEW CARDIOVASCULAR CENTER

(Continued from page 143)

teins, biochemical regulation of muscle contraction, identification of stress patterns in the heart walls, and drug effects on coronary circulation. Several projects related to the cerebral circulation explore the mechanisms involved in hypertensive encephalopathy and stroke.

Work of several investigators in the Center has been in the forefront of the field and has attracted national and international recognition to cardiovascular programs at Iowa. In recognition of the leading position of our scientists in the Cardiovascular Center, we have been given the responsibility for editing the premier journal of cardiovascular research in the world — *Circulation Research*, published by the American Heart Association.

How is the operation of the Center funded?

OPERATIONAL FUNDS come through successful competitive application for research grants by individual faculty members and interdisciplinary groups of faculty. Despite the

intense national competition for federal grants, the faculty has been successful in attracting almost \$7 million of direct and indirect support in 1981-82 to the College of Medicine through the National Institutes of Health. Over the past decade, funds from this source have totaled nearly \$35 million. There has been no direct allocation of state funds to the Cardiovascular Center. Grant support from the Iowa and American Heart Associations also has been substantial over the past 10 to 15 years, reaching nearly \$1 million.

What does the Center mean for patients?

THROUGH THE Center's education programs, the findings of researchers often move directly to the bedside to help heart patients. We all know that dramatic strides have been made in reducing the toll taken on our nation's health by diseases of the heart and blood vessels. Still, more than 30 million Americans suffer from these diseases and more than one million die from them annually. The need to maintain and expand programs aimed at developing our knowledge of these diseases must continue to be a matter of high priority.

We invite all physicians to visit the Cardiovascular Center and to participate in the learning experiences that it provides. Harvey is anxious to meet you.

1982 IMS HOUSE OF DELEGATES

Physician delegates from county medical societies will be in Des Moines May 1 and 2 to establish and update policy for the Iowa Medical Society. Nearly 20 resolutions are in hand as this is prepared, along with several committee reports, for attention by the 1982 IMS House of Delegates.

The IMS House will convene at 9 a.m., on Saturday, May 1, at the Marriott Hotel. Sessions of the House are open to any interested member physician. Open discussion of the resolutions and other items will occur during afternoon reference committee hearings; again, any member may participate.

The concluding session Sunday morning will see the House acting on reports submitted by the reference committees. Also scheduled Sunday is the election of officers for the 1982-1983 year and the installation of Hormoz Rassekh, M.D., as the new Society president. The slate of officers proposed by the Nominating Committee has been reported in the April IMS UPDATE.

The IMS Auxiliary is conducting its annual meeting April 30/May 1 in conjunction with the House of Delegates.

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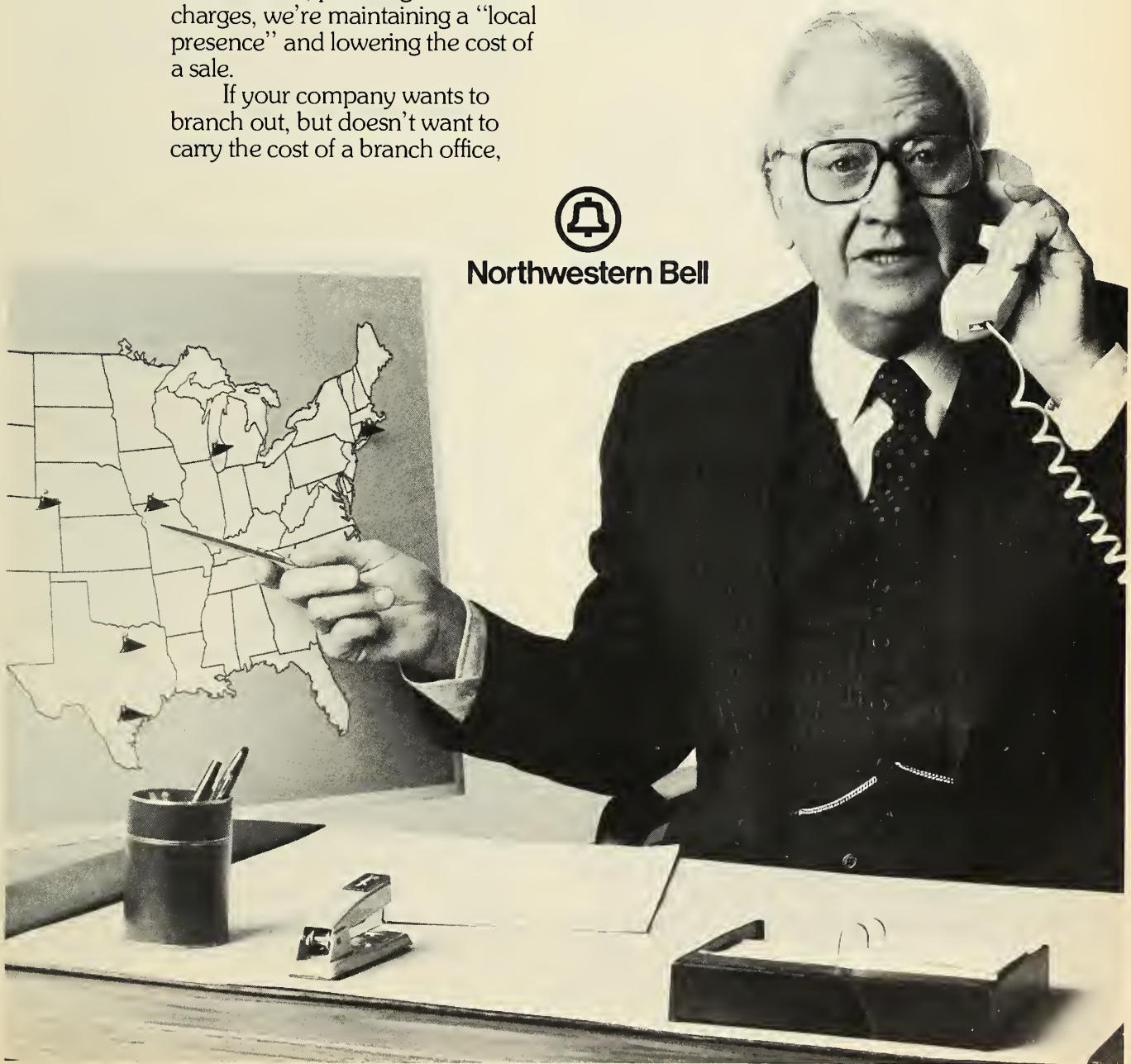
Without any cost to our customers, they can dial a local number and the call is automatically forwarded to us. So, for as little as \$16 a month, plus long distance charges, we're maintaining a "local presence" and lowering the cost of a sale.

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find out about the availability of Remote Call Forwarding in your area. It's another Telemarketing tool from Northwestern Bell that can help make your organization more productive.



Northwestern Bell



The 1981 Entering Class

GEORGE L. BAKER, M.D.

Iowa City, Iowa

A NEW GROUP OF 175 students began medical study at the University of Iowa College of Medicine in August, 1981. They will be graduated in May, 1985.

APPLICANTS

These 175 students were selected from a total of 540 persons who applied for places in the class. Three hundred sixty of these applicants were Iowa residents.

The number of women in the final applicant group was 183, or 34% of the total number of applicants. This is an increase from 128 in 1979-80.

While the number of applicants to medical school has been falling nationally for several years, applications from Iowa residents have remained constant at about 360 the last several years. The academic credentials of the applicants continue to be strong. As a result of better information regarding medical school admissions, there is more self-selection by potential applicants, and fewer applicants with marginal records apply.

The number and percentage of women applying to medical school has been increasing nationally and in Iowa for several years. They present with similar academic credentials and are admitted in generally the same proportion as in the applicant group.

THE EARLY DECISION PLAN

The College of Medicine participates in an Early Decision Plan (EDP) of application. Under this plan an applicant submits one early

From 46 different Iowa counties come the members of the U. of I. freshman medical class. Of the class of 175, 28 are residents of other states. The class has 105 men and 70 women. Better than a quarter of the Iowans are from towns under 5,000 population.

application to his or her first choice medical school. The EDP applicant agrees that, if offered admission by the EDP decision date (October 1), he or she will accept that offer and not apply to other medical schools. The medical school agrees to review and decide upon all EDP applications prior to the EDP decision date.

Non-resident applicants, except for those applying to either the MSTP (M.D.-Ph.D.) or EOP (Educational Opportunities Program), are required to apply through the Early Decision Plan. The number of EDP applications was 100 in 1979-80 and 113 in 1980-81. Eighty-five of this year's EDP applications were submitted by Iowa residents and 28 by residents of other states. Forty-nine EDP applicants were admitted, including 35 Iowa residents and 14 non-residents.

1981 ENTERING CLASS

The entering class is comprised of 175 students, 105 men and 70 women. The average age of the entering class is 22.4 years, with a range of 19 to 34 years. Students came from 46 of Iowa's 99 counties. Many different undergraduate courses of study were followed. The most common was one of the natural sciences.

Nineteen percent of the members of this

Dr. Baker is associate dean for student affairs and curriculum at the University of Iowa College of Medicine.

TABLE I
NEW STUDENTS

83% Residents of Iowa
27% From Communities Under 5,000
16% Communities Between 5,000 to 25,000
57% Communities Over 25,000

class were married when they started medical school.

Most of the new students (83%) are residents of the state of Iowa. Twenty-seven percent of the class came from communities of less than 5,000 population and 43% came from communities of less than 25,000 population.

The applicants had achieved an overall grade point average of 3.3 on a 4.0 scale. The admitted class had a 3.66 overall grade point average. Science achievement was essentially the same as the overall achievement, a 3.6 average.

All applicants take the new Medical College Admissions Test (new MCAT). This test has scores from 1-15 with the national average being an 8. Students admitted to this class scored an average of 9 or 10 on each of the 6 subtests. These subtests include biology, chemistry, physics, science problems, reading and quantitative skills analysis.

There were no differences in the academic credentials of men and women in this class. Sex of the applicant is not a consideration.

Thirteen applicants were admitted at the end of their third year of pre-medical study. At the other end of the spectrum, 16 new students have pursued some graduate study; 7 have completed master's degrees, and 2 have received Ph.D.'s.

The Educational Opportunity Program (EOP) provides educational and financial assistance to disadvantaged students. There were 28 applicants for this program. Thirteen new EOP students are included in the 1981 entering class.

The Medical Scientist Training Program (MSTP) is designed to prepare highly qualified men and women for careers in creative professional activity in the pre-clinical and clinical sciences. Four members of the class will participate as MSTP students and work toward both M.D. and Ph.D. degrees. There were 37 applicants for this program.

DELAYED ENTRY PLAN

Students admitted to the College of Medicine are permitted to delay their enrollment for one year. Students who do so often cite reasons such as personal growth, completion of degree requirements, earning and saving money, and completion of research projects. A number of students have discovered that they become less certain of their desire for a medical career once the goal of admission to medical school has been attained. Some of these students have delayed entry for a year while they re-examine their personal and career goals. Nine students originally admitted in 1979-80 delayed entry until this year, and 7 of these 9 have indicated they will enroll in the fall. Six of the 1980-81 admittees have indicated that they will delay entry until the fall of 1982.

ADMISSIONS COMMITTEE

The Admissions Committee is made up of 16 members representing both clinical and basic science faculty, students, and the medical community. The committee met 10 times during the year to review admissions policies and practices and to evaluate applications. In addition, each member of the committee spent many hours reviewing applications in preparation for the meetings.

The committee is charged by the Dean to recommend for admission those applicants who appear to be best qualified for the study and practice of Medicine. This is a difficult task, as the committee is presented with a large number of very good applicants each year.

The Admissions Committee considers all applications and makes all recommendations for admissions to the College of Medicine. There are no quotas for special groups or programs. No consideration is given for alumni, faculty, or contributors. Each applicant is considered on his or her own individual merits.

FINANCIAL AID

Most students receive financial aid. Five hundred fifty-six of 711 medical students in all 4 years received some form of financial aid in 1980-81. The total amount was \$3,242,128 of which \$2,568,807 was loans. By far the most used loan program is the Guaranteed Student Loan which provided \$1,872,173 to 471 University of Iowa medical students in 1980-81.

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One of man's most amazing explorations and scientific adventures, the successful Gemini flight program was a triumph of imagination and—teamwork. Two men learned to operate in space, to rendezvous, to dock, and to work outside their spacecraft in the hard vacuum of outer space. Not only did they coordinate their efforts with ground backup, they also complemented each other's activities within the close confines of the space capsule.



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* Meeting of Am Soc Colon/Rectal Surgeons, May 1980

** Based on total prescriptions filled for hemorrhoidal preparations during the first three quarters of 1981. The National Prescription Audit, IMS America Ltd, Sept 1981.

* 1981 data from leading marketing research organization.

ANUSOL-HC[®] Suppositories/ ANUSOL-HC[®] Cream

Before prescribing, please see full prescribing information. A Brief Summary follows:

Indications and Usage: Anusol-HC Suppositories and Anusol-HC Cream are adjunctive therapy for the symptomatic relief of pain, itching and discomfort in external and internal hemorrhoids, proctitis, papillitis, cryptitis, and fissures, incomplete fistulas, pruritus ani and relief of local pain and discomfort following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present. After acute symptoms subside, most patients can be maintained on regular Anusol[®] Suppositories or Ointment.

CONTRAINDICATIONS
Anusol-HC Suppositories and Anusol-HC Cream are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparations.

WARNINGS
The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy, they should not be used unnecessarily on extensive areas, in large amounts or for prolonged periods of time.

PRECAUTIONS
General
Symptomatic relief should not delay definitive diagnoses or treatment. Prolonged or excessive use of corticosteroids might produce systemic effects.

If irritation develops, Anusol-HC Suppositories and Anusol-HC Cream should be discontinued and appropriate therapy instituted.

In the presence of an infection the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly, the corticosteroid should be discontinued until the infection has been adequately controlled.

Anusol-HC is not for ophthalmic use.

Pregnancy
See "WARNINGS"

Pediatric Use
Care should be taken when using the corticosteroid hydrocortisone acetate in children and infants.

DOSEAGE AND ADMINISTRATION
Anusol-HC Suppositories—Adults: Remove foil wrapper and insert suppository into the anus. Insert one suppository in the morning and one at bedtime for 3 to 6 days or until inflammation subsides. Then maintain comfort with regular Anusol Suppositories.

Anusol-HC Cream—Adults: After gentle bathing and drying of the anal area, remove tube cap and apply to the exterior surface and gently rub in. For internal use, attach the plastic applicator and insert into the anus by applying gentle continuous pressure. Then squeeze the tube to deliver medication. Cream should be applied 3 or 4 times a day for 3 to 6 days until inflammation subsides. Then maintain comfort with regular Anusol Ointment.

NOTE: If staining from either of the above products occurs, the stain may be removed from fabric by hand or machine washing with household detergent.

Store between 59°-86°F (15°-30°C)

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PD-85-JA-0867-P-1 (2-82)

Preceptorship in Family Practice

CHARLES E. DRISCOLL, M.D.

Iowa City, Iowa

THE PRECEPTORSHIP EXPERIENCE for medical students at the University of Iowa College of Medicine is a 2-week experience in family medicine. Prior to 1980 no exposure was required of every medical student to the discipline of family practice. By vote of the College of Medicine faculty in 1980, the Preceptorship in Primary Care was changed to the Preceptorship in Family Practice. All junior medical students now have a 2-week community-based experience in a family practice office. It exposes them to realistic models of family medicine before finalizing their senior year class choices.

For students who are interested in family medicine careers, the preceptorship provides a look at "real world" practice. For students who are interested in another discipline, the preceptorship gives them an understanding of what the primary care family practitioner must deal with in everyday practice and the necessity for good consultation skills with other specialties.

PROGRAM REDESIGNED

The preceptorship has been redesigned to implement both behavioral and skill level objectives. A preceptorship instructor's manual was designed in 1981 for the use of both the student and the teacher at the community-based location. The evaluation of the student

Looked at very positively by the students is the required 2-week family medicine preceptorship. The opportunity is available for additional family physicians to participate in this mutually rewarding education program.

was changed to include both subjective and objective evaluation tools. Each student is required to complete 3 exercises of a paper-and-pencil nature designed to supplement the practical preceptorship experience and to give the student an appreciation for some concepts of family medicine.

These self-instructional exercises encourage the student (1) to keep a practice diary, (2) to look at the natural history of disease in the primary care setting, (3) to provide practical patient education, (4) to practice appropriate skills of consultation and referral, and (5) to document clinical procedural skills. Practicing family physicians have been trained to teach, using continuing education seminar sessions for improvement of their precepting skills.

A typical preceptorship experience begins with the student contacting a community-based family physician and requesting a 2-week rotation. The objectives of the program are given in writing to the student along with the necessary materials for completing the rotation. During the 2 weeks, the student is encouraged to spend the majority of his or her time with one physician, learning the practice style and private life style of that practitioner. In many cases, the student stays in the home of the practitioner so they may go together on night calls and to various community activities. Outside living arrangements are made by a third of the practitioners for their student trainees. Preceptor sites are available through-

Dr. Driscoll is an assistant professor of family practice in the University of Iowa College of Medicine and course director of the Preceptorship in Family Practice.

out the state and in particular in practices that are located in health manpower shortage areas or in areas where exposure to the responsibilities of clinical family medicine is likely.

COMPLETE EVALUATIONS

At the completion of the 2-week, community-based rotation, the student returns to the University and both the teacher and student complete evaluations of the experience and return them to the Department of Family Practice. The grading system is now in line with the rest of the junior rotations, with a grade of Honors, Pass or Fail being possible. Students who wish to demonstrate their interest and skill in primary care may seek the Honors grade to build their credentials for application to Family Practice residency programs.

Teaching practitioners are selected for their desire to teach and because their practice models the concepts of family medicine. The practitioner should be board certified in family practice and be willing to take 2-3 junior students each year. The precepting physicians are also encouraged to take a teaching skills workshop to augment their skills in clinical teaching and student evaluation. Family physicians who meet the above qualifications and who are not currently preceptors may inquire about the opportunity to teach by writing: Charles E.

Driscoll, M.D., Course Director of Preceptorship in Family Practice, Room 171 CH, Department of Family Practice, University of Iowa Hospitals, Iowa City, Iowa 52242.

In summary, the preceptorship experience has taken on a major change in structure over the past 2 years. The preceptorship has lent itself to adaptation as a junior required course exposing 100% of the students to the discipline of family medicine. Students wishing to take preceptorships in other specialties may still do so on an elective basis during their senior year. The preceptorship combines educational objectives with teacher training to provide a quality experience for each student.

POSITIVE IMPACT

The students evaluate the preceptorship very positively and look at it as a major training factor in the junior year of medical school. Aside from the Medical Education and Community Orientation program (M.E.C.O.), this family practice preceptorship is the only community medicine students experience away from the tertiary care center during their first 3 years in medical school. Because it is an enjoyable learning experience, not only have medical students been encouraged to consider family medicine as a viable career alternative, but many have been able to gain a better appreciation for primary care as practiced by Iowa family physicians.

TO COVER NUCLEAR IMPLICATIONS

The medical consequences of nuclear weapons and nuclear war will be covered in a symposium on April 24 at the University of Iowa Memorial Union. A panel of renowned national authorities in medicine, science, and arms control will contribute their expertise at the meeting which is designed for physicians, other health professionals and the public.

Among symposium speakers will be Dr. Jonathan Fine, executive committee chairman, Physicians for Social Responsibility, Boston; Dr. Herbert Scoville, president, Arms Control

Association, Washington, D.C.; and Dr. Kosta Tsipis, associate director of the program in Science and Technology for International Security, Massachusetts Institute of Technology.

The program has been organized by Physicians for Social Responsibility, Inc., a nonprofit organization committed to public and professional education on the medical implications of nuclear technology. The symposium is sponsored by the U. of I. College of Medicine in cooperation with the College of Nursing, with support from the Stanley Foundation, Muscatine, and the Stanley — U. of I. Foundation Support Organization, and the Iowa chapter, Physicians for Social Responsibility.

Appreciation to Physician Preceptors

THE UNIVERSITY OF IOWA College of Medicine extends sincere appreciation to the 129 Iowa physicians who served last year (academic year 1980-1981) as preceptors for third- and fourth-year medical students and

for students in the Physicians Assistant Program. These preceptorships are an important element in the College's outreach effort. They permit students to observe first-hand a medical practice away from the academic setting.

1980-81 PRECEPTORS FOR THIRD YEAR PRECEPTORSHIP

Served Students From Class of 1982

Ankeny	Rodney R. Corlson, M.D. (2)
Boone	John F. Murphy, M.D. (5), Wayne E. Rouse, M.D. (3)
Burlington	A. Patrick Schneider, II, M.D. (1)
Cedar Falls	Robert N. Bremner, M.D. (1), Philip E. Rohrbough, M.D. (1), James R. Young, M.D. (2)
Cedar Rapids	James F. Stiles, M.D. (6), Robert L. Swoney, M.D. (5), Mork J. Tyler, M.D. (3)
Centerville	James B. McConville, M.D. (5)
Conrod	Glendon D. Button, M.D. (1)
Corydon	Keith A. Gorber, M.D. (1)
Council Bluffs	James T. Mulry, M.D. (2)
Creston	Peter R. Morcellus, M.D. (1)
Decorah	James A. Bullord, M.D. (2), Drew Pellett, M.D. (2)
Denison	Romaine L. Bendixen, M.D. (2)
Des Moines	James R. Bell, M.D. (2), James L. Blessmon, M.D. (3), Charles R. Peterson, M.D. (3), Ronald A. Shirk, D.O. (1)
Dyersville	Anthony Sweeney, M.D. (4)
Elkader	Kenneth E. Zichol, M.D. (1)
Emmetsburg	Corlyle C. Moore, M.D. (2)
Estherville	Robert S. Hronoc, M.D. (1)
Fairfield	James H. Dunlevy, M.D. (3), Gene E. Egli, M.D. (2)
Fort Madison	Glen A. Goblerson, M.D. (2)
Grinnell	Bernhard G. Wiltfong, M.D. (1)
Guttenberg	Eugene M. Downey, M.D. (4), Robert J. Merrick, M.D. (2)
Iowa City	Victor G. Edwards, M.D. (5), Mitchell C. Ruffcorn, M.D. (5)
Kolono	Dwight G. Sottler, M.D. (4)
Le Mars	Daryl E. Doorenbos, M.D. (1), James E. Powell, M.D. (1), Gerold L. Von Es, M.D. (1)
Leon	Lorry W. Richord, M.D. (1)
Manchester	Mory A. Arends, M.D. (3), Poul A. Seorles, D.O. (2), John E. Tyrrell, M.D. (2)
Monillo	John M. Hennessey, M.D. (2)
Morengo	Don Higon, M.D. (1)

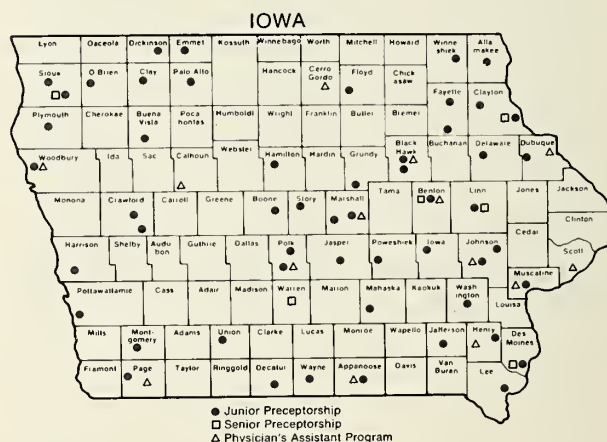


Figure 1 shows the community locations of physicians who served as preceptors for the three groups of students.

Marshalltown	Milton J. Von Gundy, M.D. (2), David L. Thomas, M.D. (2)
Missouri Valley	John M. Bornes, M.D. (2)
Muscatine	Forrest D. Deon, M.D. (3), Steven S. Krogh, M.D. (3), Deon McGinty, M.D. (2), Patrick A. Tronmer, M.D. (4)
Newton	Morvin R. Moles, M.D. (1)
Oelwein	Robert S. Joggord, M.D. (1)
Orange City	Roy J. Hossebroek, M.D. (1)
Oskaloosa	R. Michael Collison, M.D. (4)
Red Oak	William G. Artherholt, D.O. (2)
Rockford	Russell G. Borrett, M.D. (1)
Sheldon	Ronald L. Zoutendorn, M.D. (1)
Shenandoah	Kenneth J. Gee, M.D. (1)
Sioux Center	Richard A. Jongewoord, M.D. (1)
Sioux City	John H. Roberts, M.D. (1)
Solon	Bruce R. Von Houweling, M.D. (1)
Spencer	George F. Fieselmann, M.D. (1), John E. Kelly, M.D. (7)

Figures in parentheses show number of students physicians had during year.

Spirit Lake Danald F. Radowig, M.D. (2)
 State Center Larry R. Beatty, M.D. (1)
 Storm Lake Timothy K. Daniels, M.D. (1), Gary C. Olson, M.D. (2)
 Stary City Charles E. Semler, M.D. (3)
 Vinton Shermon L. Anthony, M.D. (1)

Waterloo Kent R. Opheim, M.D. (2), Karl Jouch, M.D. (2)
 Waukan Richard D. Perry, M.D. (1)
 Webster City Subhash C. Sohail, M.D. (2)
 West Union Susan Urbatsch, M.D. (4)
 Winfield Billy R. Nardyske, M.D. (4)

1980-81 PRECEPTORS FOR FOURTH YEAR ELECTIVE PRECEPTORSHIP

Served Students from Class of 1981

Burlington A. Patrick Schneider, II, M.D. (2)

Cedar Rapids Robert L. Swaney, M.D. (1)
 Guttenberg Robert J. Merrick, M.D. (1)
 Indianalo Donald G. Flary, M.D. (1)
 Orange City Carl Vander Kaai, M.D. (1)
 Vinton Sherman L. Anthony, M.D. (1)

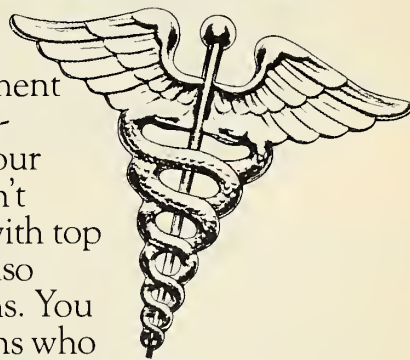
1980-81 PHYSICIANS ASSISTANT PROGRAM PRECEPTORS

Centerville Anthony Owca, M.D.
 Clarinda Kirpal Singh, M.D.
 Davenport Gardan Cherwitz, M.D., Eugene Johnsan, M.D., Farrest Smith, M.D.
 Des Moines Michael Abroms, M.D., Albert Bostram, M.D., Gertrude Daughten, M.D., L. R. Dragstedt, M.D., Jahn Hess, Jr., M.D., David Koung, M.D., Alda Knight, M.D., Thomos Lucas, M.D., Danold Lulu, M.D., Laran Parker, M.D., Greg Rahts, M.D., Rizwon Shah, M.D., Sutin Srisumrid, M.D., Dennis Walter, M.D.
 Dubuque Allen Harves, M.D., Paul Laube, M.D., Robert Melgoord, M.D., Peter R. Whitis, M.D.

Iowa City Albert Crom, M.D., David Culp, M.D., Gerold DiBano, M.D., Douglas Laube, M.D., Michael R. Mickelson, M.D., Thomas Vargish, M.D., Creighton B. Wright, M.D.
 Lake City James Comstack, M.D.
 Mosan City Morie Alcarin, M.D., Richard Munns, M.D.
 Marshalltown Axel Lund, M.D., Donald Reading, M.D.
 Mt. Pleosont Albert Kaplan, M.D., Condiath Thiagarajoh, M.D.
 Muscatine Armir Arbisser, M.D., William Catalana, M.D., Forrest Dean, M.D., Charles Hannald, M.D., Gerald P. Kealey, M.D., Steven S. Kragh, M.D., David Kundel, M.D., Richard Kundel, M.D., Dean McGinty, M.D.
 Sioux City Gerold J. McGawan, M.D., Daniel Roins, M.D.
 Vinton Shermon L. Anthony, M.D.
 Waterloo Dole Phelps, M.D., Robert Sauer, M.D., Robert Singer, M.D., Luke Tan, M.D., Charles A. Waterbury, M.D.

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COMMENTING EDITORIALLY

MARION E. ALBERTS, M.D.
SCIENTIFIC EDITOR

COLLEGE COMMENDATION

"D'ye think th' colledges has much to do with the progress in the wurruld?" asked Mr. Hennessy.

"D'ye think," said Mr. Dooley, "'tis th' mill that makes th' water run?"

FINLEY PETER DUNNE ("Mr. Dooley")
(1867-1936)

Colleges and Degrees

TIS AN APT REPLY, Mr. Dooley. The colleges and universities have much to do with the progress of the world. This issue of the JOURNAL recognizes again the University of Iowa College of Medicine as a driving force in the progress of our profession. True, it is the primary objective of the College to educate those who will become the physicians of

PROPER EMERGENCY CARE

Physicians must help educate farm workers as to the proper emergency measures to follow when agricultural accidents occur. At this time of the year accidents involving fertilizers and herbicides are one of our main concerns.

Water is the best solution for emergency treatment of ammonia burns. An adequate supply of fresh clear water should be kept available for immediate use wherever ammonia solutions are stored or used. Time is important. Water should be freely washed over any affected areas. If the burns are extensive and a

tomorrow; however, there are other missions. Education of those who have attained the professional degrees in an evermore complex arena of medicine continues to be a major undertaking. Research in the health sciences is not an overshadowed endeavor. Onward the progress of the art and science goes at a pace that requires continuing attention by educators and students alike. The University of Iowa masters that mission in good and true form and tradition.

The JOURNAL is indebted to the faculty of the College for submission of many erudite manuscripts. It is unfortunate that all cannot be published and that oftentimes considerable delay ensues between acceptance and publication.

It is often a difficult task to reject a fine manuscript. Sometimes the length is not in keeping with limitations imposed by economics and presumed reader interest.

We are also indebted to the members of the faculty who devote untold hours in the business of the Iowa Medical Society. Academic physicians have as much at stake in our Society as the practicing physicians in the villages and cities throughout Iowa.

The continuing education programs of the College maintain a momentum that must be hailed as excellent. We are grateful for the liaison with Dr. Richard Caplan. His efforts in the overall program are excellent, including his contributions to the JOURNAL.

We hope our readers feel a closer kinship to the College of Medicine through this issue. Yes, Mr. Hennessy, we agree that the colleges do have much to do with the progress of the world. — M.E.A.

water tank is available immersion of the body is indicated. Flushing and irrigation should continue for at least 15 minutes. Contaminated clothing must be removed because of the freezing action of anhydrous ammonia. The patient should be kept warm. No salves, oils, or ointments should be applied.

The prior use of these measures will be of great benefit when the physician assumes the total care of the patient. Specific care can then proceed to prevent or treat shock, eye damage, pulmonary edema, and corrosive effects upon the mucous membranes of the respiratory tract and the esophagus. — M.E.A.



Clinical Services Directory

The University of Iowa Health Center

IN KEEPING with its long history of service to Iowans of all ages and stages of development, The University of Iowa offers a number of specialized services through its health resources. In some instances, these are the only such services available in the state. In addition to their direct benefit to Iowans, these services are essential to the education of students in many disciplines and to the continuing education of practicing professionals throughout the state. And beyond these vital functions is the stimulation of new knowledge through research, which is integral to the total program.

This Clinical Services Directory at the University is an updated version of the one published in the University issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY in April, 1979, in cooperation with the Health Center. Following this distribution to physician members of the Iowa Medical Society, the Directory will be made available to other professionals in the state. Physicians who would like additional copies of the Directory may write to Health Center Information, 283 Medical Laboratories Building, Iowa City, Iowa 52242. The map above shows the U. of I. health complex.

University of Iowa Hospitals and Clinics

UNIVERSITY OF IOWA Hospitals and Clinics is the largest of the nation's university-owned teaching hospitals. As such, it operates in support of community physicians and hospitals statewide as Iowa's comprehensive tertiary care center. In this capacity it offers specialized diagnostic and therapeutic services to all Iowans and residents of adjacent states.

The programs and staff of University Hospital School, Oakdale Hospital and Psychiatric Hospital are integrated administratively with the University Hospitals to comprise a single hospital system. The Hospital is organized into 16 clinical services with 75 distinct medical subspecialties. The clinical services include anesthesia, hospital dentistry, dermatology, family practice, internal medicine, neurology, psychiatry, obstetrics and gynecology, ophthalmology, orthopaedics, otolaryngology, pathology, pediatrics, radiology, surgery, and urology. The Hospital and its clinical programs are fully approved by all state and national accrediting bodies.

PATIENT APPOINTMENTS

TELEPHONE REQUESTS

Between 8 a.m. and 5 p.m. Monday-Friday, patient admissions or clinic appointments may be completed expeditiously by direct-dialing the clinical services appointment scheduling centers listed below. Night and weekend requests for urgent patient appointments may be directed to the Emergency Admissions Unit at telephone number 319-356-2683.

CLINICAL SERVICE APPOINTMENT SCHEDULING (Area Code 319)

Allergy		Obstetrics &	
Adult	356-2927	Gynecology . . .	356-2294
Pediatric	356-1828	Ophthalmology . . .	356-2852
Dermatology	356-2274	Orthopaedics	356-2223
Hospital Dentistry	356-2205	Otolaryngology &	
Internal Medicine		Maxillofacial	
(and all Medical		Surgery	356-2201
Subspecialties)		Pediatrics	356-2229
Outpatient	356-2927	Psychiatry	
Inpatient	356-3408	Adult	353-5422
Neurology	356-2571	Child	353-4980

Radiology		Surgery	
Diagnostic	356-3350	General	356-2902
Nuclear	356-1911	Neurosurgery . .	356-2237
Radiation		Thoracic & Car-	
Therapy	356-2253	diovascular . .	356-2271
Rheumatology	356-2927	Urology	356-2421

(For numbers not otherwise listed, dial 356-1616, Area Code 319)

Individual direct-dial telephone numbers for University Hospitals' clinical staff are contained in the Physician's Desk Reference Guide distributed annually to Iowa physicians and dentists.

WRITTEN REQUESTS

The University Hospitals supplies copies of a *Universal Patient Referral Form* to community physician offices for convenience in securing clinic appointments by mail. Written requests for patient appointments should be addressed to the Director, Admissions Department, The University of Iowa Hospitals and Clinics, Iowa City, Iowa 52242.

CLINICAL DATA ON REFERRED PATIENTS

Clinical laboratory results, X-rays, EKG tracings, and other clinical findings of value in our care of your patient should be sent with the patient when he/she comes to University Hospitals for an appointment or admission.

Histopathology tissue slides should be sent to the Department of Pathology along with a copy of the referring pathologist's report. Also indicate the clinical service or staff physician to whom the patient has been referred and whether or not the slides may be permanently retained. Telephone inquiries may be directed to the Department of Pathology at 319-356-2906.

PATIENT TRANSPORTATION

To make University Hospitals services available to patients statewide, a transportation service with 15 specially-designed vehicles is available to move the patient from his home to the Hospital and return. This service may be arranged by the community physician when the patient's appointment is requested.

EMERGENCY TRANSPORTATION

AIR-CARE EMERGENCY HELICOPTER

To request Air-Care, telephone (toll free) 1-800-272-6440, in Iowa. In neighboring states, dial (toll free) 1-800-553-6292. In the Iowa City

area, dial 353-6440. The jet-powered aircraft staffed with a critical care nurse (and a specialized physician if needed) can be airborne within 5 minutes after a call is received. The helicopter is equipped with oxygen and suction, a portable defibrillator with heart monitoring, emergency drugs, airlift stretchers, and other accommodations for the in-flight care of adult and pediatric emergency patients.

MOBILE CRITICAL CARE UNIT

To request this unit, telephone 1-800-272-6440, in Iowa. Outside Iowa, dial 1-800-553-6292. In the Iowa City area, dial 353-6440. The Mobile Critical Care Unit is a 26-foot long van which duplicates the environment and technology within hospital intensive care units.

FIXED WING AIRCRAFT

Request this service by telephoning 1-800-272-6440, in Iowa. In surrounding states, dial 1-800-553-6292. Twin-engine air ambulances are available at the Iowa City airport to provide patient transportation. Upon arrival at the Iowa City airport, patients are transferred to University Hospitals via the Mobile Critical Care Unit.

NEONATAL TRANSPORT SERVICE

Physicians or hospitals referring critically ill infants may arrange for transportation through the Pediatrics Department by telephoning 319-356-1616.

NEONATAL CONSULTATIONS

Neonatal consultations may be obtained by telephoning 319-356-1635.

POISON CONTROL CENTER

Rapid and accurate information for poisoning emergencies is available 24 hours per day by telephoning 1-800-272-6477 (toll-free) or in the Iowa City-Coralville area by dialing 319-356-2922.

FINANCIAL ARRANGEMENTS

The University of Iowa Hospitals and Clinics and its clinical staff are organized to provide a single standard of care to all patients, regardless of a patient's financial status. Based upon the recommendation of the referring physician or dentist, patients are assessed "full" or "partial" fees within one of three financial designations.

PRIVATE PAY

Patients assigned to this category are responsible for paying professional fees in accord with arrangements made between the patient and attending staff physicians and dentists. Such patients are also fully responsible for payment of hospital charges. Most patients in this category participate in some form of private or governmental health insurance plan and should present their insurance enrollment identification at some time during their hospitalization.

CLINICAL PAY

Patients of limited financial means (those who do not pay full professional fees to community physicians and dentists) may be referred under this category upon mutual agreement of the referring physician or dentist and University Hospitals' clinical staff physician or dentist. Patients so designated are responsible for all hospital charges, but inpatient professional fees beyond insurance coverage are waived.

STATE PAY

Residents of Iowa may be referred for care in this category after county authorities have issued a certification authorizing complete hospital and professional care, beyond insurance coverage, at state expense. Requests for care under this designation should be directed to the director of social services in the patient's home county.

University Hospital School

The University Hospital School serves as a statewide resource for handicapped children and young adults. The programs of the facility provide a wide variety of direct and indirect services to disabled persons, including close cooperation and assistance to local service programs that are involved with care and management of infants, children, and young adults with developmental disabilities, including chronic health impairments.

Direct clinical services in the facility are provided by staff of the Division of Developmental Disabilities, Department of Pediatrics. The interdisciplinary staff that provide these services are from 11 professions: dentistry, education, occupational therapy, physical therapy, psychology, medicine, nutrition, nursing, rec-

reation, social services, and speech-language pathology/audiology. These services are organized so that members of these professions have direct contact, as needed, with each patient. Consultations are arranged with all other clinical departments of the University of Iowa Hospitals and Clinics where appropriate. These tertiary level services are designed to assist physicians, educators, and other community-based personnel with local care and management. Therefore, an integral part of these services is close communication with community health, educational, and habilitative services.

OUTPATIENT SERVICES

Outpatient services provide comprehensive evaluations and follow-up of infants, children, and young adults who have problems and/or disabilities that affect their development. Assisting families to understand and manage these problems is an integral part of these services, as is augmenting services that may be provided in the local community. Information is routinely obtained from parents, local physicians and/or dentists, school personnel, social service, and other appropriate agencies prior to the evaluations.

Each evaluation is concluded with a meeting of the staff who have seen the child and/or interviewed family members. Professional persons who are providing services to the child in the local community are encouraged to attend and participate in these discussions. Recommendations are formulated and are communicated to the child, where appropriate, to parents, and to community-based service providers. These recommendations may require a follow-up evaluation. A detailed report is sent to all appropriate professional persons and agencies.

SPECIAL OUTPATIENT CLINICS

These outpatient services include a number of special clinics in which specially trained and experienced staff are assigned to serve a particular problem and/or disability.

The *Child Development Clinic* provides interdisciplinary evaluations of developmental, learning, and behavioral problems in children. This Clinic will complete a comprehensive study of any child who has problems in the following areas: (1) development, (2) speech and language, (3) poor school performance

and learning disability, (4) hyperactivity, (5) mild behavior problems, (6) psychological problems associated with medical conditions, (7) developmental problems associated with socially dysfunctional families, including child abuse and neglect.

The *Meningomyelocele Clinic* is specially organized to include consultations by urologists and orthopedists, for services to infants, children, and young adults with spina bifida.

Children with genetic/metabolic conditions including phenylketonuria, galactosemia, and fetal alcohol syndrome are seen in the *Genetic and Metabolic Disorders Clinic*; diet therapy and academic progress will be monitored for children with these conditions where appropriate.

The *Infant and Young Child Clinic* provides evaluations and follow-up services for infants and young children who are suspected or identified as having any type of developmental disability that is not appropriate for the other special clinics.

Children and young adults who are chronically obese may be seen in the *Weight Management Clinic* where weight reduction programs (including exercise and nutritional management) and family counseling are provided.

The *Child and Young Adult Clinic* provides service for the variety of developmental disabilities, including cerebral palsy, congenital abnormalities, and mental retardation, that may be referred.

ELIGIBILITY AND REFERRALS

All infants, children, and young adults, and their families are eligible for these services. Referrals are accepted from physicians, school personnel, community service agencies, parents, or young adult patients.

Requests for appointments in one of the outpatient clinics may be made by writing to the Coordinator, Outpatient Unit, University Hospital, Iowa City, Iowa 52242. Appointments also may be made, or further information may be obtained, by telephone calls to that Coordinator (319/353-7021) or calling the following numbers: Child Development Clinic (319/353-4825); Meningomyelocele Clinic (319/353-7054 or 319/353-5978); Genetic and Metabolic Disorders Clinic (319/353-4825); Infant and Young Child Clinic (319/353-4605); Weight Management Clinic (319/353-7054 or 319/353-6915); Child and Young Adult Clinic (319/353-7021).

INPATIENT SERVICES

Infants, children, and young adults may be admitted to the Inpatient Unit on recommendation from one of the outpatient services. Admissions are for relatively specific goals that can best be accomplished by the interdisciplinary staff on an inpatient basis (e.g., intensive monitoring of medication for a child with severe diabetes; design and construction of an adaptation of a wheelchair or other assistive device for a physically handicapped child; a comprehensive vocational education assessment for disabled young adults and intensive educational evaluations; and prolonged dental procedures where dental and medical surveillance is desirable). The staff coordinates educational services with the local school system to maintain continuity of school services while the child is in this Unit.

The Inpatient Unit has a 30-bed capacity. Admissions average 25-30 days and are seldom longer than 60 days.

Specialized Child Health Services

The Iowa Specialized Child Health Services (SCHS) is a statewide care system that provides specialized diagnostic, treatment and follow-up services required by handicapped Iowa children. It is a state agency administered as an outreach service of The University of Iowa Hospitals and Clinics.

Most young people referred to SCHS have difficult health problems that require specialists and a special program of care. SCHS clinics are held throughout the year at about 21 locations across the state to provide these Iowa children with the consultative support of highly skilled persons from The University of Iowa.

SERVICES

The agency provides diagnostic evaluation in clinics for persons under the age of 19 who have chronic diseases, physically handicapping conditions, speech and hearing problems, emotional problems, behavior disorders or learning difficulties. *Pediatric clinics* are held for persons with chronic or congenital health problems not covered in specialty clinics. *Cardiac clinics* assist those who have had rheumatic fever, congenital heart disease or heart problems. *Ear, nose and throat* clinics and *orthopaedic*

clinics aid persons with these problems. *Special clinics* serve cystic fibrosis and muscle disorders. *Developmental clinics* serve children with complex educational/behavioral/health problems.

Staff who travel throughout the state with the mobile clinics to conduct the examinations are Health Center specialists in pediatrics, orthopaedic surgery, otolaryngology, speech pathology, audiology, clinical and educational psychology and physical therapy. Clinic services include necessary x-ray examinations and laboratory tests.

A report of the clinic examination is mailed, with parental consent, to the family, the physician and other persons involved in the child's plan of care. The child remains in the care of the community physician with whom the family is encouraged to discuss the clinical findings and recommendations. Patient management follow-up services are provided to assist families in obtaining the recommended care.

ELIGIBILITY AND COST

Services are primarily directed toward the needy or medically indigent. The eligibility requirement is a person under age 19 with a known or suspected handicapping condition. Services are provided on a non-discriminatory basis at clinics. Charges are billed to third party payors but families are not billed directly.

REFERRALS

Children may be referred by physicians or other persons in the community who are involved with child care. Referral forms should be mailed to Medical Records Center, Iowa Specialized Child Health Services, University Hospital School, University of Iowa, Iowa Iowa City, Iowa 52242. A supply of forms may be obtained at the same address.

FURTHER INFORMATION

For information or questions regarding patient services, telephone: (319) 353-5428.

Veterans Administration Medical Center

The Iowa City Veterans Administration Medical Center opened in March, 1952. It is located on a 12-acre tract of land adjacent to The University of Iowa College of Medicine and the University Hospitals complex. It is

closely affiliated with each of the University's health science colleges.

ELIGIBILITY

Hospitalization: Any veteran released or discharged from military service under conditions other than dishonorable may be provided hospitalization if he or she states under oath that he or she is unable to defray the cost of necessary hospital care elsewhere. The "ability to pay" statement is not required for veterans who have service-connected disabilities, who are 65 years or older, or who are in receipt of a VA pension.

Pre-hospital and Post-hospital Care: Certain outpatient medical services may be provided to prepare a veteran for hospital care and to complete treatment of a veteran who has been furnished hospital care.

REFERRAL

Veterans who report to the hospital are examined to determine their health care needs. This process will be facilitated if the veteran's physician telephones or writes the admitting physician at the VA Medical Center and gives the pertinent medical information. A copy of military discharge papers is needed.

COST

There is no charge to eligible veterans.

FURTHER INFORMATION

Write to: Chief, Medical Administration Service (136), Veterans Administration Medical Center, Highway 6 West, Iowa City, IA 52240. Telephone: (319) 338-0581, Extension 241.

Speech and Hearing Clinic

Services of the clinic are of three types: (1) outclinic evaluation and consultation services for children and adults with speech, language and/or hearing problems; (2) dayclinic habilitation or rehabilitation service programs for such children and adults; and (3) a summer residential program for children with speech, language, hearing and/or reading problems.

OUTCLINIC AND DAYCLINIC PROGRAMS

Outclinic evaluation and consultation services may be obtained for any type of com-

munication problem. In addition to speech pathologists and audiologists, the staff includes a psychologist. Evaluations and consultations with physicians and persons of other health care professions are arranged in certain specialty areas, such as voice disorders and neuromotor based speech disorders. This service is designed to determine the nature of the communication problem and to provide management recommendations.

Dayclinic therapy programs usually can be arranged if the child or adult who has the problem can come to the clinic on a regularly scheduled basis. An outclinic evaluation is usually required prior to scheduling this service and the person may be scheduled to be seen for a number of hours daily or on a less frequent basis.

DATES

These services are available from mid-September through mid-December and mid-January through mid-May. Outclinic services are also available through June and July.

ELIGIBILITY AND REFERRALS

All children and adults are eligible for these outclinic and dayclinic services. Referrals are accepted from any source, including self-referrals.

COSTS

Fees are charged for services given. Payment may be reduced or waived for individuals unable to pay the regular fees. Upon request for a reduction or waiver of fees, a determination of what is to be paid will be made following appropriate review of the circumstances.

SUMMER RESIDENTIAL PROGRAM

In conjunction with the University's Reading Clinic, a 6-week residential program for some 50 to 60 children is conducted each summer. Speech, language and/or aural rehabilitation work is designed to meet the needs of each child. Typically, a child is scheduled for 2 or 3 daily individual periods as well as one or more periods of group remediation. Children who need assistance only with reading are routinely given an hour of individual assistance daily on these skills. Group instruction in social studies, science, and mathematics, by listening and doing rather than by reading, is also provided daily. For children who need help with both

their oral communication and reading skills, combined programs can be arranged according to individual needs.

Children live in a University dormitory throughout this 6-week period. Meals are served in a dormitory cafeteria. A staff of child care workers live with the children. The children's nonclinic activities, including a recreational program, are supervised by a staff psychologist, and medical care is provided by the Child Health Clinic of the University Hospitals and Clinics.

DATES

The program usually begins the second week in June and ends after the third week in July.

ELIGIBILITY AND REFERRALS

Outclinic evaluations are usually required before April 1 for children to be considered for enrollment in the program for the subsequent summer. Referrals from any source are accepted.

For speech-language work and/or aural rehabilitation, children must be between 8 and 16 years of age. Also they must be judged (a) able to profit from intensive therapy, (b) sufficiently motivated to cooperate in the program, and (c) sufficiently mature to adjust to being away from home. Children with any type of speech, language and/or hearing problem are considered for admission to the program, irrespective of the cause of the problem. Children will not be accepted if their prime need for a residential program is due to maladjustment, mental retardation, or other psychological or social problems.

For the reading clinic program, students must be between 8 and 10 years of age. They must be of at least average intelligence and listening ability. Their reading skills must be so deficient as to require individual teaching. They also must be able to profit from the opportunity to participate in a classroom where no reading or writing ability is required, and they must be sufficiently mature to adjust to being away from home.

COSTS

At the publication of this Directory, total charges to families for this program are about \$460. A staff member is available to work with families and statewide or local agencies if financial assistance is needed.

FURTHER INFORMATION

Inquiries regarding services or requests for appointments should be addressed to: Director, Speech and Hearing Clinic, Wendell Johnson Speech and Hearing Center, Iowa City, Iowa 52242. Telephone: (319) 353-5463. For a child to be considered *for a reading problem only* in the Summer Residential Program, inquiries can be directed to: Co-Directors, James B. Stroud Educational Services Center, N326 Lindquist Center, Iowa City, Iowa 52242. Telephone: (319) 353-6597.

Stroud Educational Services Center

Through coordinated activities within the research and training mission of the College of Education, multidisciplinary services are available for clients who have questions about the cognitive, affective, educational, and vocational aspects of their lives. In addition, consultation resources are being developed for organizations concerned with educational programming, with personnel selection and training, and with improving the work environment.

SERVICES

Assessment, short-term intervention and/or referral for more intensive or long-term intervention, and systematic follow-up are offered as direct services to individuals of all ages. Indirect services include consultation with schools, area education agencies (AEA), health settings, business organizations, community agencies, and other services, as well as inservice development and research.

Assessment Service: Clients are accepted for educational/psychological diagnosis by appointment with the Center. Upon request, application forms will be mailed to the client, parents, or teacher.

COST

The assessment fee for educational/psychological evaluation is \$40, payable on the day of examination. For tutoring and/or counseling the fee is \$15/week.

FURTHER INFORMATION

Write to: Co-Directors, James B. Stroud Educational Services Center, N326 Lindquist Center, Iowa City, Iowa 52242. Telephone: (319) 353-6597.

Children's Reading Clinic

The primary purpose of the Reading Clinic is to provide professional preparation for teachers of reading, reading supervisors and consultants, and school psychologists. In accomplishing this purpose, the Clinic gives specialized and individualized teaching to a limited number of children during the summer session in cooperation with the Wendell Johnson Speech and Hearing Clinic.

SERVICES

(1) Administering diagnostic reading tests and suggesting remedial procedures for children referred by parents, school departments, and other agencies. (2) Teaching children who are retarded in reading.

The Testing Service: Children are accepted for reading diagnosis by appointment with the James B. Stroud Educational Services Center. Upon request, application forms will be mailed to the parents or teacher. An appointment date will be assigned upon receipt of the completed forms. If the child is coming to the University for treatment or examination in some other clinic, it is usually possible to make the appointment for the same day if the Stroud Center is notified sufficiently in advance. Only

a limited amount of testing service is available. In the Center, diagnostic tests are administered to the child. The results of the tests are analyzed and reported to the parents and teacher.

COST

The testing service fee is \$40, payable on the day of examination.

Remedial Teaching in the Reading Clinic: Children are enrolled in the Clinic during the summer session only and are selected on the basis of tests administered in the Speech and Hearing Clinic. The general policy is to accept only children ages 8 to 10 who are average or above average in intelligence, but are seriously retarded in reading.

COST

Fees and other details concerning the summer residential program may be found in the description of the Summer Speech and Hearing Clinic.

FURTHER INFORMATION

Write to: Co-Directors, James B. Stroud Educational Services Center, N326 Lindquist Center, Iowa City, Iowa 52242. Telephone: (319) 353-6597.

College of Dentistry

ELIGIBILITY

Any person may seek treatment for dental problems at the College of Dentistry. Treatment rendered in student clinics is provided by students and/or graduate students under faculty supervision. Additional consultation and dental services are provided by the faculty through participation in the Dental Service Plan.

ADMISSIONS

Adult clinical patients, 16 years old and older, will be screened in the Admissions Clinic. When registering, all patients will be expected to have their social security number available. Patients under age 16 will be examined in the Pedodontic Clinic.

Since the student clinics are teaching clinics, the time necessary to complete dental procedures may be somewhat longer than if the services were provided by a private practitioner. The patient's contribution in time to the educational program is appreciated and the student

fee schedule for services has been adjusted downward accordingly. When a patient is accepted for treatment, every effort will be made to provide complete dental services.

COST

In the Admissions Clinic, all patients receive complete diagnostic services, including x-rays and appropriate laboratory tests. The fee for this service is currently \$20. Fees are charged for services rendered and are due on the day treatment is provided.

SPECIAL SERVICES

A mobile clinic serves residents of long term care facilities and county care facilities within a 50-mile radius of Iowa City. Dental treatment is provided with fixed and portable equipment and includes complete diagnostic, preventive, surgical, restorative and prosthetic services.

FURTHER INFORMATION

Write or call: Associate Dean for Clinical Activities S-316 Dental Science Building, Iowa City, Iowa 52242. Telephone: (319) 353-7101.

DRUG THERAPY REVIEW



UNIVERSITY OF IOWA HOSPITALS AND CLINICS

REYNOLD SPECTOR, M.D., Editor

USES AND ABUSES OF CIMETIDINE

HISTAMINE stimulates gastric parietal cells to secrete acid, an effect not antagonized by conventional antihistamines which act on a subpopulation of histamine receptors (H_1 receptors).¹ Since 1972, a series of new antihistamines with selective actions on a second type of histamine receptors (H_2 receptors) has been introduced. H_2 receptors are found in many tissues including smooth muscle cells, nerve cells, and T lymphocytes. Clinically, the only relevant effect of H_2 blocking agents is inhibition of acid and intrinsic factor secretion by the parietal cells. Both basal and food-stimulated acid secretion are inhibited by H_2 blocking agents.

Currently, cimetidine (Tagamet®) is the only H_2 antagonist available in the U.S. Only a fraction of current cimetidine use is for FDA-approved indications²: (1) a treatment course for active duodenal ulcer lasting up to 8 weeks at a daily dose of 1.2 g; (2) the long-term prevention of recurrent duodenal ulceration with

a nightly dose of 400 mg of cimetidine; (3) the treatment of pathological hypersecretory states.

The following is a reminder that cimetidine at best temporarily suppresses peptic diseases and that acid is only one factor in mucosal inflammation of the esophagus, stomach, and duodenum. It is also a plea to reserve cimetidine for serious and clearly diagnosed disease and use antacids for occasional nondiagnosed dyspepsias. This purposely conservative view is taken because misconceptions about the natural history and the pathogenesis of some dyspeptic syndromes lead to reliance on cimetidine where other treatment modes — or no treatment — would be better.

DUODENAL ULCERS: TREATMENT AND PROPHYLAXIS

In multiple controlled trials, the healing rate of active duodenal ulcers with cimetidine was of the order of 60 to 90% as compared to 20 to 50% with placebo.³ Doses of 0.8 to 2.0 grams per day of cimetidine are equally effective, but are not any better than intensive antacid regimens (30 cc of liquid, high potency antacid 1 and 3 hours after meals and at bedtime). For ethical reasons, most studies of cimetidine permitted antacids at the patient's discretion. There is no justification, however, to place patients on full scale combined treatment. This adds to the cost, which is of the order of one dollar per day for either. Furthermore, antacids can interfere with the bioavailability of cimetidine.

In about one-fourth of patients with uncomplicated duodenal ulcers, active lesions persist after 6 weeks of treatment with 300 mg cimetidine QID. Patients with high acid secretion are more likely to be refractory to standard treatment schedules than those with normal or low acid secretion. Also, once the cimetidine treatment is stopped, the ulcer recurrence rate is not any different than that of untreated patients, that is, about 75% within a year. This aspect of the natural history of duodenal ulcers was not appreciated before serial endoscopic evaluations were performed as part of cimetidine trials. Ulcer recurrences are often asymptomatic and dyspeptic symptoms in patients with a history of ulcers may occur in the absence of ulcer recurrence. Radiographic findings often do not help to establish the presence or absence of recurrences. The recurrence rate

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This information for Iowa physicians is furnished and sponsored by the University of Iowa Hospitals and Clinics.

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of duodenal ulcers can be significantly decreased by nocturnal administration of 400 mg cimetidine.

It would be wise to reserve cimetidine primarily for the treatment and prevention of duodenal ulcers in those patients who will be under close medical supervision. In most of the 20 million or so Americans estimated to suffer from peptic ulcer disease, the clinical course is so uneventful and symptoms so mild that prolonged cimetidine prophylaxis and serial endoscopic checkups cannot be justified. It is preferable to advise all patients who present with duodenal ulcers about the avoidance of gastroduodenal irritants, the use of antacids as tolerated, and postprandial recumbency where feasible. Only if this fails should cimetidine be instituted and antacid intake curtailed after 3 days or so when symptoms have receded. If standard treatment with cimetidine (1.2 g daily for 6 weeks) fails to control duodenal ulcer disease, complications such as gastric outlet obstruction should be excluded. Poor bioavailability of the drug or excessive acid secretion should also be considered, and dosage increases or addition of anticholinergic drugs may be needed.

Long-term cimetidine prophylaxis (e.g., 400 mg HS) should be instituted in all patients whose medical condition puts them at particular risk from any ulcer recurrence and makes them poor candidates for operative treatment. Many patients with diabetes, bleeding disorders, and heart, lung, kidney, and liver failure belong in this group. Patients in good general condition and without serious peptic ulcer disease should be instructed in the avoidance of irritants, the use of antacids for occasional symptoms, and the need for further medical care only if additional problems occur. Full consideration of operative treatment should be given in all patients suffering from severe ulcer disease before embarking on long-term cimetidine prophylaxis. Evidence of chronic or recurrent bleeding, penetration, or frequent symptoms despite optimal medical management remain indications for operative treatment as the efficacy of cimetidine for complicated ulcers has not been established. Operative treatment also offers a real chance of cure from peptic ulcer disease, and troublesome complications such as gastritis, anemia, weight loss, diarrhea, and pain are not common with modern types of vagotomy. However,

operative results have not been subject to the vigorous controlled trials, including serial endoscopies, used in the cimetidine trials.

Gastric cancer is a late risk from traditional gastric resections. One pathogenetic factor in gastric stump cancer is the increased formation of carcinogens with reduction of acid in the gastric lumen. This potential risk exists also with chronic depression of acid secretion by vagotomy and cimetidine administration.

HYPERSECRETORY STATES

Prior to the availability of cimetidine, the only means to control the Zollinger-Ellison syndrome was total gastrectomy which carried an operative mortality of 11 to 27%. Cimetidine is effective in controlling symptoms in most cases of this syndrome, making a gastrectomy either unnecessary or allowing it to be delayed until the patient is a better operative candidate. Many patients can be controlled with standard doses of cimetidine. However, in some, larger doses or combination with an anticholinergic drug may be necessary. Changes in dosage may be needed, and, without continuous treatment, relapse will occur with potentially severe consequences. Cimetidine has also been used to control the gastric hypersecretory states accompanying the short bowel syndrome, systemic mastocytosis, and basophilic leukemia.

ANASTOMOTIC ULCER

Ulcers which occur after ulcer operations are difficult to treat. Two controlled studies have shown that cimetidine significantly improves the healing rate of anastomotic ulcers. This is an important advance because reoperations are difficult and have a high complication rate. Unfortunately, the use of cimetidine in the prevention of relapse of anastomotic ulcers has not been specifically addressed. Therefore, patients with anastomotic ulcers should be put on long-term treatment or prophylaxis and evaluated periodically.

GASTRIC ULCER

For active gastric ulcers, the benefit of cimetidine treatment seems marginal. Cimetidine may have a role in the prevention of recurrence of gastric ulcers, however. Cimetidine was superior to placebo in the prevention of recurrences of gastric ulcers when used in doses of up to 1.0 gm per day. Whether smaller doses

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malpractice

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suffice and whether treatment has to continue indefinitely is unclear. The treatment of gastric ulcers in patients on steroidal and nonsteroidal antiinflammatory drugs has not been well studied. In one study, cimetidine (1.2 gm per day) plus intensive antacids was superior to intensive antacids alone in promoting the healing of gastric ulcers in patients on a variety of antiinflammatory agents.

REFLUX ESOPHAGITIS, GASTRITIS, AND DUODENITIS

Clinical trials of cimetidine in reflux esophagitis have given equivocal results.⁴ This is understandable since gastric acid is only one factor in the etiology of esophagitis: hypersecretion of acid per se does not cause esophagitis, and achlorhydria does not protect against it. In most studies, cimetidine significantly alleviated heartburn. Only in a few studies was there also improvement of gross or microscopic esophageal inflammation even after 6 to 8 weeks of treatment. Symptoms usually returned shortly after cimetidine was stopped, and nothing suggests that cimetidine prevents the long-term complications of esophagitis. In particular, cimetidine does not decrease the need for recurrent dilation of esophageal strictures. Chronic cimetidine treatment of reflux esophagitis should be reserved for patients with scleroderma and the like in whom alternative treatment modes (e.g., metoclopramide, bethanechol, fundoplication) are contraindicated.

It is not known if acid plays an important role in the development of gastritis and duodenitis. The development or persistence of gastritis and duodenitis in patients whose duodenal ulcers healed on cimetidine suggest that cimetidine is not of benefit for the treatment of these conditions.

PROPHYLAXIS OF STRESS ULCERATION AND MANAGEMENT OF ACUTE UPPER GASTROINTESTINAL HEMORRHAGE

In two patient groups prone to stress ulcers (patients with hepatic failure and head injury), cimetidine was better than placebo in preventing bleeding from acute gastroduodenal lesions. There was no comparison with antacids in these studies. Antacids virtually eliminate stress ulcerations if used in amounts sufficient to raise the gastric pH above 3.5. Cimetidine was equal to antacids in the prevention of stress ulcers in one study of burn patients; however, it was shown to be inferior in another study on patients in a surgical inten-

sive care unit. This occasional cimetidine failure may be related to the fact that even 2.4 gm of cimetidine per day will not raise the gastric pH above 3.5 in 25 percent of the critically ill. It has furthermore been suggested that the active secretory state protects the gastric mucosa from injury and that suppression of acid secretion robs the gastric mucosa of this protection. As with most other indications, the current popularity of cimetidine in the prophylaxis of stress ulceration relates more to its ease of administration than to any demonstrable benefit over conventional treatment modes. Cimetidine has not been shown to be better than placebo in the management of upper gastrointestinal hemorrhage in general, but it is reasonable to use cimetidine in the initial treatment of upper gastrointestinal hemorrhage from acute duodenal ulceration. This should be done with the realization that cimetidine per se will not stop or prevent recurrence of the bleeding. On the other hand, cimetidine has little role in the treatment of bleeding esophageal varices or upper gastrointestinal malignancies.

MISCELLANEOUS CONDITIONS

There are several additional conditions in which inhibition of gastric acid secretion is beneficial. Gastric acid may inactivate oral enzyme replacements in pancreatic insufficiency, and cimetidine rather than oral sodium bicarbonate can be used to prevent such inactivation. Cimetidine has also been used to prevent the metabolic alkalosis which occurs with prolonged nasogastric suctioning, and to reduce the risk of aspiration of gastric contents in patients who are comatose or undergoing anesthesia.

PHARMACOKINETICS

Cimetidine is well absorbed from the proximal small bowel,⁵ and peak blood levels of 1.5 µg/ml occur 60 to 90 minutes after ingestion of 300 mg cimetidine. Since the half-life of cimetidine is about 2 hours, and a blood level of 0.5 µg/ml is sufficient to reduce maximal acid secretion by half, effective levels are generally maintained for about 4 hours after the standard oral dose of cimetidine. The bioavailability of the drug is about 70%, but cimetidine absorption may be decreased by concurrent administration of antacids. About 70% of the drug is cleared within 24 hours by the kidneys.

(Please turn to page 162)

(Continued from page 161)

Cimetidine clearance is poor in many elderly people regardless of kidney function. Because of individual variations in bioavailability and clearance, therapeutic blood levels of at least 0.5 µg/ml may not occur in some individuals, or blood levels may not be adequate to suppress basal or food-stimulated acid secretion. These factors should be considered in treatment failures, and blood levels or acid secretory responses should be determined in such patients two hours after a dose of cimetidine.

Kidney failure requires reduction of cimetidine dosage.⁶ Table 1 gives suggestions of dosages according to the creatinine clearance. In patients on dialysis, cimetidine should be administered at the end of dialysis.

TABLE 1
DOSAGE OF CIMETIDINE IN KIDNEY FAILURE

Creatinine Clearance	Dose of Cimetidine
above 75 ml/min	full dose (1.2 g/d)
50-75 ml/min	200 mg QID
15-50 ml/min	200 mg TID
below 15 ml	200 mg BID

Cimetidine is a safe drug — up to 16 g cimetidine have been taken without serious effects. Sedation is a common effect of conventional antihistamines. Somnolence and confusion result occasionally if cimetidine concentrations are high in serum and cerebrospinal fluid. Very young and very old patients and patients with kidney or liver failure are at particular risk. Withdrawal of the drug is all that is needed in most instances but physostigmine seems to be an effective antidote.

Gynecomastia and galactorrhea occur with cimetidine. The effects of cimetidine on fertility are not known, but cimetidine has been incriminated in low sperm counts. Granulocytopenia, thrombocytopenia, and aplastic anemia are rare with cimetidine. Transient elevation of BUN and serum transaminases are common but interstitial nephritis and hepatitis are rare. Bradycardia has also been rarely associated with cimetidine.

Histamine is a potent activator of suppressor T cells. Cimetidine may interfere with this activation, cause increased immunologic re-

sponsiveness, and augment delayed hypersensitivity responses. Patients whose tolerance to dinitrochlorobenzene was reversed by treatment with cimetidine have been described.

The short-term safety of cimetidine does not imply that long-term administration is without risk.^{7, 8} Gastric acid has not only pathogenetic but also functional roles. Acid is important particularly for peptic digestion, iron absorption, release of gastrointestinal hormones, and sterility of the proximal gut. It is possible that nutritional and other problems will eventually occur from long-term suppression of acid secretion.

SUMMARY

Cimetidine is an effective and safe drug for the reduction of gastric acid secretion. It is readily absorbed and its primary route of excretion is via the kidneys. The standard treatment dose should be reduced in renal insufficiency and in some elderly patients. It may have to be increased in some patients with high acid secretion or poor bioavailability of the drug. Cimetidine may have important effects on the activity of those drugs which are normally metabolized by the liver.⁹

Cimetidine is an important advance in the treatment of selected patients with duodenal ulcer disease and many patients with anastomotic ulcers and the Zollinger-Ellison syndrome. Cimetidine has added little to the current management of gastric ulceration, stress ulcers, upper gastrointestinal hemorrhage, esophagitis, gastritis, and duodenitis, and its liberal or long-term use in these conditions is questionable. — Thomas E. Phillips, M.D., and Konrad Schulze, M.D., Division of Gastroenterology and Hepatology.

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STATE DEPARTMENT/ PUBLIC HEALTH

IOWA FAMILY PLANNING PROGRAM

*This report has been prepared by Carolyn S. Adams,
director of the Iowa Family Planning Program.*

FAMILY PLANNING SERVICES have not always been available nor accessible to the majority of our U.S. population. Various factors have contributed to the government's consideration of the service as an integral part of quality, preventive health care.

Generally, birth control advocates were not regarded with much respect in the U.S. in the years prior to World War II. After the war, however, Americans became concerned about the impact of worldwide population growth on the economic stability and security of the U.S. Thus, the government began to put funds into population research.

By the mid 1960's, contraceptive technology advanced to a level where distribution of oral contraceptives became a reality. Government funds were appropriated to develop public, subsidized family planning programs in the U.S. and other countries. The 1967 Economic Opportunity Amendment gave family planning a special emphasis status in the anti-poverty programs under Title II. Family planning became one of 8 national O.E.O. programs. On June 7, 1973, administrative responsibility and funds were transferred from the Office of Economic Opportunity to the Department of Health, Education, and Welfare (now Health and Human Services).

Iowa responded to this national change by having the Iowa State Department of Health designated as the grantee recipient of family planning funds. Through its network of linkages with state and local agencies, the Department was in an ideal position to serve statewide. With this capacity and commitment, the Iowa State Department of Health began to administer the statewide family planning program under enabling legislation and funding of the Family Planning Services and Population Research Act.

In July, 1980, 6 agencies requested release from their contracts with the Iowa State Department of Health to establish a separate umbrella grantee. This was approved by the Department, and on October 1, 1980, the Department transferred funds for the 6 agencies.

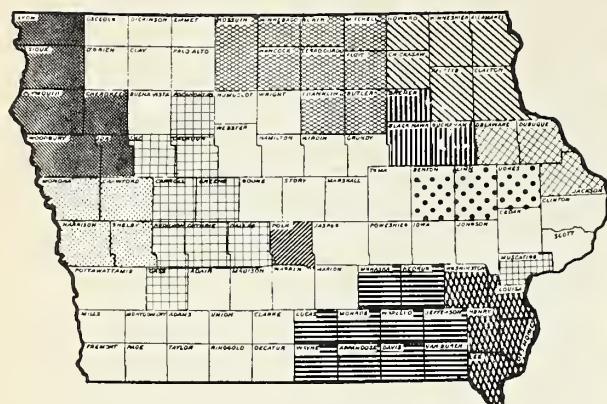
The Iowa Family Planning Program is administered by the Iowa State Department of Health and covers 60 counties. The Department contracts with 12 local agencies for family planning services (a map and directory of agencies is provided). These agencies represent 5 different organizations: Community Action Programs, Planned Parenthoods, Independent Health Agencies, hospitals, and a private social service agency. Each agency has a specified geographic area in which it provides family planning services; it does not extend patient recruitment beyond its area. The Department allocates family planning funds to its contract agencies, establishing the scope of the Program, evaluating the local and State Program, providing for training and technical assistance to local agencies, and ensuring fiscal and programmatic accountability in accord with all applicable laws.


Funding regulations require the Program to provide a broad range of acceptable and effective medically approved family planning methods (including natural family planning methods) and services (including infertility services and services for adolescents). Services must be provided on a voluntary basis to individuals without regard to religion, race, color, national origin, handicapping condition, age, sex, number of pregnancies, or marital status. Abortion may not be a method of family planning. Priority must be given to low income individuals with charges made to others in accord with their ability to pay.


Medical services provided to family planning patients are under the direction of physi-


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cians with training and experience in family planning. Each local agency has a medical director responsible for medical policy and procedures, ensuring appropriate staff supervision. Additional medical consultation comes from the Health Department's Maternal and Child Health medical director and the obstetrics/gynecology consultant. Agencies' medical directors also supervise services by other family planning staff, including nurses and other allied health personnel.

Each local agency has a staffing pattern and service delivery mechanism appropriate for its service area. The level of service has been developed in response to the community's support for the family planning program. The majority of agencies use volunteers to work alongside the staff.

Significant standardization in services has

occurred since 1977, directed toward establishing cost indicators. This allows objective funding and evaluation to occur, regardless of the local agency size or location. In recent years the local agencies have achieved a more independent management status, and have broadened their sources of financial support. As of this fiscal year, the level of financial support provided by this Department from federal funds varies from 89% to 19% of the overall family planning budget of the agency. Each of the agencies collect Title XIX, Title XX, patient fees, and in-kind support. To the extent feasible, agencies coordinate their family planning services with other services of the organization and community. This generally provides greater cost efficiency. In the past calendar year, the agencies provided family planning services to 25,124 users, of whom 76% were low income.

Each of the family planning agencies, whether their delivery system is a clinic, mini-clinic, physician referral, or a combination of these, provides a basic medical and educational component to a full-program patient. During an initial visit to a family planning agency, a full-program patient receives:

- A. Family Planning Counseling
 - 1. Basic reproductive anatomy and physiology, if needed;
 - 2. Discussion of the benefits of planned pregnancy, if needed;
 - 3. Presentation of all the methods of contraception;
 - 4. Identification of the methods of choice for the patient.
- B. General Medical History
- C. Laboratory Services
 - 1. Hemoglobin or hematocrit
 - 2. Pap Smear
 - 3. Height/weight
 - 4. Blood pressure
 - 5. Gonorrhea culture, if requesting an IUD
 - 6. Gonorrhea culture, urinalysis, VDRL, if indicated
 - 7. Pregnancy test, if indicated

- D. Physical Exam
 - 1. General exam, including heart, lungs, thyroid, extremities, abdomen
 - 2. Breast exam, including self-exam instruction
 - 3. Pelvic exam, including visualization of the cervix and bi-manual exam
- E. Provision of contraceptive supplies (or at least Level I infertility services)
 - 1. Methods available
 - a. Oral
 - b. IUDs
 - c. Diaphragm
 - d. Foam/condom
 - e. Natural family planning
 - 2. Method-specific counseling, including proper use, risks, and warning signals

The state's average cost for serving such a patient is \$60. Evaluations show the agencies rate high in meeting the federal quality assurance indicators (provider: encounter ratios, referral and follow-ups, and costs).

An important component in the Iowa Family Planning Program is a computerized patient service record system. This year the Program plans to streamline the paper aspects of the

(Please turn to page 168)

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February 1982 Morbidity Report

(Continued from page 167)

Disease	Feb. 1982 Total	1982 to Date	1981 to Date	Most Feb. Cases Reported From These Counties
Amebiasis	11	19	0	Boone, Johnson, Scott
Brucellosis	0	0	0	
Chickenpox	1001	1896	2691	Linn, Polk, Clinton
Cytomegalovirus	2	2	2	Johnson, Linn
Eaton's Agent infection	20	45	8	Polk, Linn, Scott
Encephalitis, virol	2	2	1	Linn, Muscatine
Erythema infectiosum	22	40	227	Wopello, Soc
Gastroenteritis (GIV)	2236	3306	6603	Polk, Linn, Wopello
Giardiasis	14	19	9	Scattered
Hepatitis, A	8	16	61	Scattered
Hepatitis, B	8	14	13	Scattered
Hepatitis type unspecified	3	3	11	Scattered
Non A, Non B	3	4	0	Scattered
Herpes Simplex	14	40	32	Johnson, Linn, Polk
Herpes Zoster	3	3	2	Pottowottomie
Histoplasmosis	1	7	3	Polk
Infectious mononucleosis	23	47	74	Block Hawk, Linn
Influenza, lab confirmed	1	1	125	Wopello
Influenza-like illness (URI)	5630	9415	32722	Linn, Johnson, Polk
Meningitis				
aseptic	1	4	16	Linn
bacterial	10	25	22	Scattered
meningococcal	2	3	7	Story
Mumps	5	10	20	Scattered
Pertussis	0	0	1	
Robies in animals	38	66	120	Scattered
Rheumatic fever	0	1	3	
Rubello (German measles)	0	0	0	
Measles	0	0	0	
Salmonellosis	25	35	32	Polk
Shigellosis	5	8	10	Polk
Tuberculosis				
total ill	11	13	26	Scattered
bact. pos.	10	3	15	Scattered
Venereal diseases:				
Gonorrheo	412	726	703	Polk, Scott, Block Hawk
Syphilis	2	3	4	Polk

Laboratory Virus Diagnosis Without Specified Clinical Syndrome: Adenovirus — 1, Johnson, 2, Polk; Guillain Barre — 1, Johnson, 1, Scott; Legionnaire's Disease — 2, Johnson, 1, Monroe; Reye Syndrome — 1, Fayette; Bacterymia — 1, Woodbury; Coccidiomycosis — 1, Linn; Echovirus — 5, Clinton, 2, Dubuque, 1, Linn, 2, Scott; Coxsackie — 1, Johnson; Compylobacter — 6, Dubuque, 1, Johnson, 3, Linn, 4, Marshall, 2, Polk, 1, Tomo, 2, Warren, 1, Woodbury; Toxic Shock — 1, Johnson, 2, Pottowottomie.

operation through a cross-reference utilization of the computerized data system. Additional computer utilization has occurred in clinic management through Patient Flow Analysis (PFA). Agency personnel have received training to conduct such analyses, and out of it to pick up problem areas in scheduling, staff utilization, and other aspects. The PFA has increased in use by the family planning agencies and has helped them assess their clinic operations and implement change accordingly.

Training and technical assistance during the fiscal year is coordinated and/or provided by the State Program. Last fall, a series of regional workshops were conducted on-site across the state with the expertise of the state's epidemiologist. Other workshops this year have been held on program management, natural family planning, services to the disabled, infertility services, and interpersonal skills counseling. The need for such workshops is identified through local agency needs assessment and state evaluation. Costs for training have been minimized through the use of state resources and coordination with other related programs.

The Iowa Family Planning Program was successful during 1980 in regional and national competition for special initiative grants. There are 5 federal areas of special initiative: *natural family planning, Job Corps, infertility, community education, and counseling*. The availability of these funds has allowed for: all local agencies to have a staff member specifically training in natural family planning methods instruction, along with adequate supplies; linkage of a local family planning agency with Iowa's Job Corps site in Denison; training for all agencies to deliver Level I infertility services; needs assessment of family life education curriculum in communities; and development and delivery of a counseling curriculum for counselors in family planning agencies.

The Iowa Family Planning Program, even though administered by the State, has generally been viewed as a federal program. With the direction of the "New Federalism," it will be a challenge for the Iowa Family Planning Program to endure the transition of funds and authority. Given the history of the program, the network of agencies committed to the idea of individual reproductive freedom, and the support which communities have demonstrated, continuing resources will be found.

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C. V. EDWARDS, M.D./1902-1981

These memorial comments are about Dr. Edwards, of Council Bluffs, who served as president of the Iowa Medical Society in 1964. They have been written in cooperation with his son, C. V. Edwards, Jr., M.D., who practices family medicine in Council Bluffs.

C. V. EDWARDS, SR., M.D., was a Council Bluffs native. His father died in his mid-forties, while Dr. Edwards, Sr., was still in medical school. His mother was forced to go to work to support the family, but he managed to finish medical school. However, there was not enough money for his two younger brothers to get more than high school educations. This taught Dr. Edwards the value of an education and it became one of the things he wanted most for his own children. One of his main goals in life was to see that this was provided.

He was a thinker and an innovator. At many stages in his life he was "ahead of the crowd" in medical care. He was one of the co-founders of the Cogley Clinic in Council Bluffs in the late 1920's, at a time when the concept of group medical practice was in its infancy. When Dr. Papanicolaou first developed the concept of "Pap Smears," Dr. Edwards studied directly under him in the second class to which Dr. Papanicolaou taught his technique. When the

Cogley Clinic moved into its present building 28 years ago, it was Dr. Edwards who spent much time with the architects and medical building consultants developing the best concept possible to handle the projected patient type and load.

Dr. Edwards was interested in organized medicine and devoted much time and energy to the Iowa Medical Society, first as a delegate, then as speaker of the House, and finally as president-elect and president. For many years he made almost weekly trips from Council Bluffs to Des Moines; the majority of time it was before I-80.

He was interested in teaching and for many years taught at Creighton Medical School. His love of teaching carried through to his handling of the hospital nurses and staff where he practiced. He was generous with his time and his knowledge and his financial resources. He was a gentleman, slow to anger, with a reputation for fairness. He was honest and aboveboard in his dealings with his patients, students and his colleagues. He had firm beliefs in the way things should be handled. He was open and always ready to listen to the other person's viewpoint and could change his own ideas if something better was presented. He was devoted to his church, to his wife and family, to his community and to his profession.

ASSISTANTS' STATE CONVENTION

The American Association of Medical Assistants, Iowa State Society, will have its 1982 convention April 23-25 in Cedar Falls. The session will mix business, education and entertainment.

Subjects to be covered at the instructional

sessions include administrative procedures, positive self-esteem, intensive care of the newborn, infant stimulation and dialysis. The president's message will be delivered Saturday, April 24, by Sherry Chidester, CMA-A.

Registration may be made with Mrs. Bonnie Sommer, Suite 201, St. Francis Professional Building, St. Francis Drive, Waterloo, Iowa 50702. Hotel reservations may be made direct with the Holiday Inn, Cedar Falls (1/319-277-2230).

RHEUMATIC DISEASES WORKSHOP

The immunopathology, diagnosis and treatment of rheumatic diseases will be covered in a program for the practicing physician in Des Moines April 30 and May 1. This is an educational program of the Iowa Chapter of the Arthritis Foundation and will be at the Savery Hotel.

The program will provide 10 hours of Category I credit. As an organization accredited for CME, the U. of I. College of Medicine has designated this continuing medical education activity as meeting the criteria for 10 credit hours in Category I of the AMA Physician's Recognition Award. In addition, this CME offer meets the criteria of the U. of I. for 1.0 (CEU's), and 10 hours of prescribed credit by the American Academy of Family Physicians.

For more information, contact the Iowa Chapter, Arthritis Foundation, 1501 Ingersoll, Des Moines, Iowa 50309, or call 515/243-6259.

ABOUT IOWA PHYSICIANS

Dr. Dennis Jones, Council Bluffs, has been elected chairman of the Council Bluffs Board of Health. . . . Officers of the Guthrie County Memorial Hospital medical staff for 1982 are — **Dr. Herbert Neff**, Lake Panorama, president; **Dr. D. E. Taylor**, Stuart, vice president, and **Dr. D. W. Todd**, Guthrie Center, secretary. . . . **Dr. Surendra K. Seth** joined Medical Associates in Clinton in February. Dr. Seth received his medical education at the University of Grenoble, France, and completed both an anatomical clinical pathology residency and family practice residency at St. Francis Hospital.



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al in Peoria, Illinois. **Dr. Jose Martinez** has been named president of the Pottawattamie-Mills County Medical Society. Other new officers are — **Dr. Ronald Bendorf**, president-elect; **Dr. Fernando Rivera**, vice president; and **Dr. Stephen Nelson**, secretary-treasurer. All are Council Bluffs physicians. . . . **Dr. Tareq Al-Khatib**, Dyersville, recently was named a fellow of the American College of Surgeons. . . . **Dr. Sherry Bulten** recently began family practice in Humboldt. Dr. Bulten received the M.D. degree at the U. of I. College of Medicine and completed her family practice residency at Iowa Lutheran Hospital in Des Moines. . . . **Dr. Larry J. Heller** recently joined the Department of Pathology at Iowa Lutheran Hospital in Des Moines. A native of Milo, Iowa, Dr. Heller received the M.D. degree at the U. of I. College of Medicine and served his pathology residency at St. Luke's Hospital in Denver, Colorado.

Dr. Willard Kuehn, Clarinda, recently was named Citizen of the Year by the Clarinda Chamber of Commerce. A plaque was presented to Dr. Kuehn in recognition of the honor. . . . **Dr. David Sands** began pediatric practice in Fairfield in February. A native of Des Moines, Iowa, Dr. Sands received his medical education at the University of Pennsylvania and the University of Iowa and served his pediatric residency at the University of Kansas Medical Center.

Dr. Jim E. Crouse, Waterloo, and **Dr. Sterling J. Laaveg**, Mason City, were named Fellows of the American Academy of Orthopaedic Surgeons at the organization's 49th annual meeting in New Orleans. . . . **Dr. Robert A. Pfaff**, Dubuque, was elected president of the Iowa Foundation for Medical Care at the recent IFMC 10th anniversary meeting. Other new Foundation officers are **Dr. Robert L. Mandsager**, Marshalltown, first vice president; **Dr. Bryce E. Wilson**, Des Moines, second vice president; **Dr. Stanley W. Greenwald**, Iowa City, secretary; and **Dr. Gerhard T. Schmunk**, Clinton, treasurer. . . . **Dr. Charles Jons**, Ames, was guest speaker at a recent meeting of the Boone County Medical Society. Dr. Jons spoke on "The Stuffy Nose and Advances in ENT." . . . **Dr. Thomas F. DeBartolo** and **Dr.**

Timothy A. Thomsen recently joined Surgical Associates of North Iowa in Mason City. Dr. DeBartolo received the M.D. degree at St. Louis University and completed his residency in orthopedics at Washington University Hospitals in St. Louis, Missouri. Dr. Thomsen received the M.D. degree at the U. of I. College of Medicine and completed his surgery residency and a cardiovascular thoracic surgery fellowship at University Hospitals. . . . New officers of the medical staff at Mercy Hospital Medical Center in Des Moines are — **Dr. Abraham Wolf**, president; **Dr. Donald Sweem**, president-elect; and **Dr. Ross Valone**, secretary-treasurer. All are Des Moines physicians. . . . **Dr. Allen Lang**, Ames, spoke at a recent meeting of the Iowa Orthopedic Society. Dr. Lang discussed "Treatment of Femoral Shaft Fractures in Children with Early Spica Cast."

Dr. Kenneth Lyons, Marshalltown, recently was named a diplomate of the American Board of Internal Medicine. . . . At a recent meeting of Hospice Care Group, Inc. **Dr. F. Dale Wil-**

son, Davenport, was presented a plaque recognizing his contribution to hospice care in Scott County. Dr. Wilson has been chairman of the group's medical advisors since it began as a pilot program two years ago and has donated many hours of volunteer service. **Dr. Vera French**, Davenport, is president of the group for 1982. . . . **Dr. Roger Ceilley**, Des Moines, was guest speaker at a recent meeting of the Guthrie-Dallas County Medical Society. Dr. Ceilley spoke on dermatology. . . . **Dr. Robert Gitchell**, Ames, spoke at a recent meeting of the Iowa Academy of Orthopedic Surgeons. Dr. Gitchell spoke on "Jogging, Cure or Disease." . . . **Dr. Bhasker J. Dave**, director of education and research, Mental Health Institute, Independence, has been named a fellow of the American Psychiatric Association. Dr. Dave has served on the staff at MHI since 1971 and in his present position since 1977. . . . **Dr. Yotin Keonin**, Lake City, was re-elected president of the medical staff at Stewart Memorial Community Hospital. Also re-elected were **Dr. Paul Knouf**, Rockwell City, vice president; and



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The Fifth Annual Black Hills Seminar on Advances in Clinical Pediatrics — June 16-18, 1982, at Sylvan Lake Resort, Custer, South Dakota, sponsored by the Department of Pediatrics and Adolescent Medicine, University of South Dakota School of Medicine. Guest faculty include Drs. Hugh Mofett, Jane Schaller, Sylvan Stool and William Strong. For complete conference information contact:

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Dr. Martin McKenney, Lake City, secretary. . . . **Dr. John Grant**, Ames, spoke at a recent meeting of the Iowa Orthopedic Association. His topic was "5 Years Experience With Total Condylar Knee Replacement." . . . **Dr. Siddiq Mohamed Arab**, Waterloo, recently was named a fellow of the American Academy of Pediatrics. Dr. Arab is chief of pediatrics at Allen Memorial Hospital and a clinical assistant professor of pediatrics at the U. of I. College of Medicine.

DEATHS

Dr. James H. Wise, 84, Cherokee, died February 15 at Sioux Valley Memorial Hospital in Cherokee. Dr. Wise received the M.D. degree at U. of I. College of Medicine and completed his surgery residency at Receiving Hospital in Detroit, Michigan. He began his medical practice in Cherokee in 1924. Dr. Wise was the founder of the Cherokee Clinic; member of the American College of Surgeons; and life member of the Iowa Medical Society.

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EVEN TO those of us who may never see or possess that many of them all at once, a million dollars hardly sounds like all that much money these days.

So a million-dollar item in the bill appropriating funds to the State Board of Regents may be easily overlooked this spring — even by Iowa physicians to whom it should have real significance.

If it is, in fact, appropriated by the General Assembly, this particular million dollars will be a modest beginning at reversing an unfortunate trend in budgeting for the University of Iowa College of Medicine.

The trend? To support a smaller portion of the College of Medicine budget each year from state funds.

Fifteen years ago, one-third of the College budget was provided from the University General Fund, which largely consists of state appropriations. This year less than one-fourth of the College of Medicine budget comes from the General Fund. Thus, the state is taking less responsibility, proportionately, for a considerably larger program.

By making the College of Medicine increasingly dependent upon federal granting sources, gifts and the earnings of its faculty, the State of Iowa has unwittingly made its medical college much more vulnerable to the whims of Washington. And it has put increasing pressure on the clinical faculty.

Dean John Eckstein, M.D., made a convincing case last year for making a start at restoring a better ratio among these sources. Then-President Willard L. Boyd and other University of Iowa administrators supported Dr. Eckstein's explanation, and the Regents included a specific request for \$4.9 million, to be used for this purpose, in their 1981-83 appropriation request.

Pessimism about the state's fiscal outlook led both Governor Ray and the legislature to pass over this increment of the Regents' request last year. But this year the Governor recommended appropriating \$1 million for this purpose when he delivered his budget message to the 69th General Assembly. And the legislature's joint subcommittee for educational appropriations included that amount in the recommendation it made in February to the full appropriations committees of the House and Senate.

Among 64 state medical colleges in a recent survey, Iowa ranked 56th in the proportion of support provided from state funds.

One reason why this should hardly be a source of pride for Iowans is that the College of Medicine provides instruction for several thousand students each year from colleges *other than* Medicine. The great majority of these students are enrolled in the other three U. of I. health science colleges — Dentistry, Nursing and Pharmacy — but a number are drawn from various science departments in the U. of I. College of Liberal Arts, and still others from Engineering.

Fee income derived by clinical faculty members supports salary and general expense budgets throughout Medicine, Dean Eckstein has said. "And," he adds, "through two big tuition increases in two years, we're calling upon our students to pay an ever-greater share of the cost of their education."

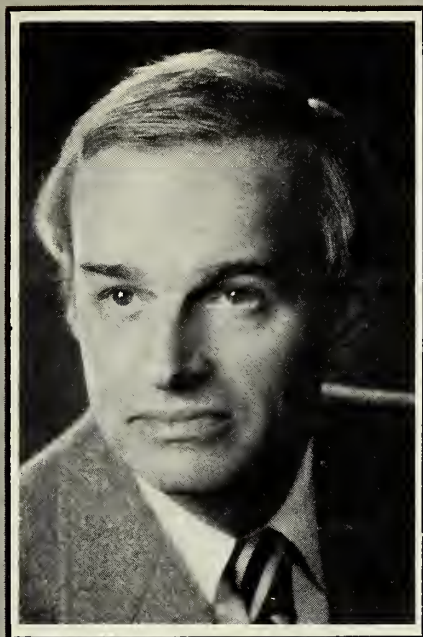
An increased measure of state support for the College of Medicine budget will add a "much needed" measure of stability to that budget, according to Dr. Eckstein. For this reason, it is hoped that the million-dollar increment now proposed for that purpose will remain in the Regents' appropriation bill all the way through legislative passage in both houses and signature by the governor.

Iowa physicians, and all citizens, for that matter, should be aware of these facts. We need to follow the progress of the U. of I. College of Medicine and support its efforts to be maximally effective.

April 1982

Journal of the Iowa Medical Society

PRESIDENT'S PRIVILEGE



A DES MOINES COMPANY with offices in Minneapolis recently offered its employees the option of joining an HMO. Not one employee joined. At first this might seem surprising, since it is known that approximately 25% of Minneapolis residents are HMO members. And in large companies, such as General Mills, HMO membership is said to be well over 50%.

The Des Moines company gives its employees a deductible co-insurance health plan which would require a rather substantial monthly out-of-pocket payment for HMO coverage. Employees apparently would rather self insure than make extra payments for comprehensive coverage. This is an example of effective cost containment. If you doubt this, I recommend you read the *Special Article* in the December 17 issue of the *NEW ENGLAND JOURNAL OF MEDICINE* by Joseph T. Newhouse, Ph.D., *et al*, entitled *Some Interim Results from a Controlled Trial of Cost Sharing in Health Insurance*.

Initiated in 1974, this research project was undertaken by the Rand Corporation to see what effect co-insurance and deductible insurance have on health care costs in 6 areas of the United States; it involved 7,706 people. The cost sharing plans were compared with a comprehensive zero cost health plan. Preliminary results indicate that people with co-insurance and deductibles spend up to 50% less per year

than do people with comprehensive plans. This results from a reduction in quantity of services. No attempt was made to reduce the cost of individual services in this study. Some have felt that consumers, especially the poor, delay seeking necessary treatment when they have deductible policies. However, Dr. Newhouse presents evidence to dispute this allegation.

Physicians have always contended that patients use services more intelligently when they have some responsibility for costs. Here is scientific evidence for this impression.

As physicians, we must provide leadership in encouraging the development of the type of cost-sharing plans described in the Rand report.

It is interesting to note that the report of the Governor's Commission on Health Care Costs will include a number of suggestions for development of similar cost sharing health insurance plans.

John H. Kelley, M.D.

A reputation takes years to build. We've been building ours as a major provider of professional liability for over 50 years, and as the Iowa Medical Society sponsored program since 1977. Since that time Aetna has returned savings to doctors of over \$1,100,000. These substantial savings have resulted from working closely with your society to provide successful risk management programs.

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THINGS YOU SHOULD KNOW

IMS SESSION FOR CME PLANNERS

Planners of CME events are welcome to attend a Wednesday, May 12 conference at IMS headquarters to discuss techniques of continuing education. The session will be of special interest to hospital CME committees and chiefs of hospital staffs. George Oetting, Ed.D., CME director, Medical Association of the State of Alabama, will present a workshop on development, measurement and evaluation of learning objectives. 4 hours of Category I credit are offered; the meeting begins at 10 a.m. Contact IMS for more info.

COST OF CARE COMMISSION

The Governor's Commission on Health Care Costs is expected to file its first major report in May. This report follows Commission evaluation of statements received from interested organizations and individuals after release of its preliminary comments. IMS Board Chairman M.E. Kraushaar, M.D., presented a Society statement at a March 24 Commission hearing.

NURSING MATTERS

The State Administrative Rules Committee acted April 13 to again delay implementation of minimum standards proposed by the Board of Nursing. This delay is in effect until 45 days into the 1983 session of the General Assembly. Several options are being considered as to the future of the proposed rules. Also, on April 21, the IMS MD-RN met with the Board of Nursing to consider draft standards for advanced nurse practitioners.

RELICENSURE REMINDER

Applications for 1983 relicensure have been mailed by the State Board of Medical Examiners. These apps include the continuing education report form. Deadline for completion and return is May 31.

RABIES BIOLOGICS DISTRIBUTION

The State Department of Health has issued a statement on the distribution of rabies biologics in Iowa. The SDH memo from R.W. Currier, chief, Disease Prevention Division, supports a regional voluntary network for obtaining rabies biologics. Network hospitals would stock appropriate biologics with physicians encouraged to meet any needs from network facilities. Physicians using the biologics will be billed for them. The SDH memo is available from the IMS on request.

HEALTH CONCERNS OF ADOLESCENTS

Five regional conferences on adolescent health are set in May under partial sponsorship of the Iowa Medical Foundation. The sessions are for parents, physicians, nurses, teachers, etc., -- those who work with youth. Cities and dates are Sioux City (12th), Mason City (19th), Bettendorf (21st), Waterloo (26th) and Des Moines (28th).

IMS MEMBERSHIP HOLDING

1982 membership in the Iowa Medical Society is holding strong. As of mid-March, total membership stood at 3,050, covering all categories; there were 2,368 active members. IMS district councilors are encouraging renewal among the few delinquents.

HEALTH BLITZ IN DES MOINES

Nutrition, safety, fitness, living habits, etc., are topics of a May Health Blitz in Des Moines. Area shopping centers will be the focus for the displays, exhibits, etc. The event is a project of the Polk County Health Education Coordinating Council with the Polk County Medical Society Auxiliary actively involved.

INSECT STING FATALITIES

Deaths suspected from insect stings are being studied by the American Academy of Allergy. Those conducting the study are seeking 10 cc of serum from any patient with a suspected insect sting death. A short clinical history is desired, as well as an autopsy report, if any. Information on this project is available from Joel D. Teigland, M.D., 1212 Pleasant, Suite 109, Des Moines 50309.

An added complication... in the treatment of bacterial bronchitis*



Brief Summary.

Consult the package literature for prescribing information.

Indications and Usage: Cefclor* (cefclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae* (*Diplococcus pneumoniae*), *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci).

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Cefclor.

Contraindication: Cefclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Cefclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

Cefclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Cefclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinistix[®] tablets but not with Tes-Tape[®] (Glucose Enzymatic Test Strip, USP, Lilly).

Use in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Use in Infancy—Safety of this product for use in infants less than one month of age has not been established.

Adverse Reactions: Adverse effects considered related to cefclor therapy are uncommon and are listed below:

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Cefclor.

Hypersensitivity reactions have been reported in about 1.5

Some ampicillin-resistant strains of *Haemophilus influenzae*—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Cefclor.¹⁻⁶

In clinical trials, patients with bacterial bronchitis due to susceptible strains of *Streptococcus pneumoniae*, *H. influenzae*, *S. pyogenes* (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Cefclor.⁷

Cefclor[®]

cefclor

Pulvules[®], 250 and 500 mg

percent of patients and include morbilliform eruptions (1 in 100), Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthritis and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Cefclor[®] (cefclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). (100261R)

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.⁸

Note: Cefclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285. Eli Lilly Industries, Inc., Carolina, Puerto Rico 00630

200066



QUESTIONS - ANSWERS

JOHN ORTNER
Des Moines, Iowa

BLUES' NEW SYSTEM

In February, Blue Cross and Blue Shield of Iowa converted to a new data processing system known as the Iowa Regular Business System (IRBS). Designed to better integrate and automate the Plans' claims processing, membership and actuarial capabilities, the new system is well underway, although efforts to fine-tune its operations continue. Commenting here on the progress is John Ortner, director, Provider and Professional Relations, Blue Cross/Blue Shield.

How is the implementation of IRBS progressing?

Considering this system conversion was perhaps the most comprehensive and intricate of any ever attempted by the Blue Cross and Blue Shield Plans across the country, we are quite pleased with the progress made so far. We knew from the onset conversion to the new system would require massive planning and hard work from our employees, as well as education and cooperation on the part of our subscribers and providers.

While we expected to experience a temporary increase in claims inventory, we have been successful in reducing that inventory significantly and are close to returning to our previous service standards.

Of course, there is still work to be done as we continue to fine-tune the system and improve its many capabilities. A top priority from the beginning of our conversion was an emphasis on accuracy and this continues to be a primary goal.

We appreciate the assistance of the medical community in helping us identify errors and ask for its continued patience as we work to correct problems that have been encountered.

Why was the new system necessary?

As demands for more flexibility and uniformity in claims processing and benefit administration surfaced in the marketplace, we were forced to stretch the capabilities of our old system beyond what it was originally designed to do.

We now have an automated system that allows us to be more efficient in gathering and maintaining membership data, in processing claims from all lines of business simultaneously, and ultimately in establishing more refined rating mechanisms. The system supports not only those key functions but its data base also will be used for research activities in many other areas of our business.

For physicians, the system allows us to provide multiple payments on one check and direct payment for Major Medical covered services. It provides more specific messages on explanations of health care benefits forms and includes separate listings for rejected claims. And it was designed to accommodate paperless claims processing and the significant growth expected in that area.

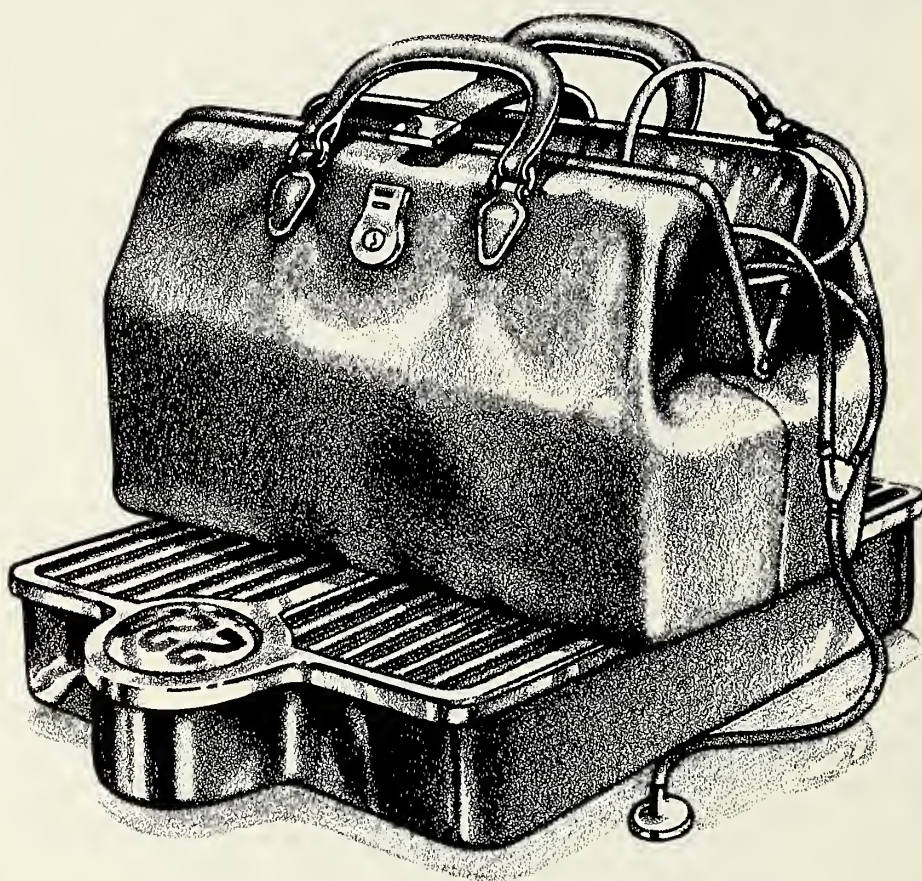
When do you expect your operations to return to normal?

To a certain degree, many of our internal operations have already returned to normal. We invested a tremendous amount of effort in training our employees to operate within the guidelines of the new system and will continue to provide more training.

In the meanwhile, we are continuing to identify and correct any "bugs" in the system, reduce our claims inventory, and concentrate on accuracy and improved service. By May, we expect to be close to our previous service standards.

Service inquiries may be directed to our Provider Service Center or to our professional relations representatives. We will continue to inform physicians of any new procedures related to the new system through workshops scheduled for later this year. In the interim, we welcome any questions on the implementation and progress of IRBS.

You're helping us keep health care costs on a low-fat diet.



Last year, with your help, Blue Cross and Blue Shield of Iowa helped trim the cost of health care for our subscribers.

Programs like Utilization Review, which monitors inpatient admissions for medical necessity; outpatient surgeries; and expansion of coverage for outpatient testing have provided a good start toward controlling costs.

Physician support is critical to the success of these cost containment

measures. By encouraging the increased use of outpatient surgery when medically appropriate and by ordering outpatient testing, you have demonstrated your interest in joining the battle against rising health care costs in Iowa.

We all need to continue to cut the fat out of health care costs.

A united effort can **keep** those costs on a low fat diet.



Blue Cross
Blue Shield
of Iowa

Mediastinoscopy for Diagnosis And Staging of Lung Disease

KENT C. THIEMAN, M.D.,
HOOSHANG SOLTANZADEH, M.D.,
RICHARD TOON, M.D., and
RONALD K. GROOTERS, M.D.

From this series of 88 procedures it is concluded the mediastinoscopy is a safe, effective method of diagnosing both benign and malignant diseases of mediastinal nodes. The authors also describe the staging of patients with carcinoma of the lung to diminish the number of unnecessary thoracotomies.

CARCINOMA OF THE LUNG remains the most common malignancy in American men and the incidence has shown a dramatic increase in American women. With the exception of oat cell carcinoma, which has recently shown some responsiveness to chemotherapy, the management of lung cancer has remained almost entirely surgical. However, from 23-50% of patients with carcinoma of the lung are inoperable.¹ Mediastinoscopy, as introduced in 1959 by Car lens,² provides a means of staging patients and thereby reducing unnecessary thoracotomies. This is especially important when one realizes the operative mortality exceeds the 5 year survival rate in patients with mediastinal node involvement. This paper will present a consecutive series of mediastinoscopies and discuss the procedure in terms of anatomy, techniques, indications and complications.

MATERIAL

A total of 88 patients underwent cervical mediastinoscopy from April, 1977 to August,

The authors are associated with the Department of Surgery, Iowa Methodist Medical Center, Des Moines, Iowa.

1981 at the Iowa Methodist Medical Center. There were 25 females and 63 males. Seventy-two patients ultimately had malignant disease diagnosed and 16 patients had benign diseases. The average age of patients with malignant disease was 65.5 years with a range of 40 to 81. The average age of patients with benign disease was 49.1 years with a range of 25 to 79.

Of the 16 patients in whom benign disease was ultimately diagnosed, 13 patients had hilar or mediastinal adenopathy on chest x-ray. All 13 had diagnostic mediastinoscopies. Ten of these 13 patients had noncaseating granulomas compatible with sarcoidosis. Two patients had caseating granulomas and tuberculosis was ultimately documented in both. The remaining patient had necrotizing granulomatous inflammation of the mediastinal nodes of undetermined etiology. The 3 patients in whom mediastinoscopy was nondiagnostic had either peripheral masses or infiltrates on chest x-ray. Two of these patients had necrotizing granulomatous processes diagnosed at thoracotomy. The third patient did not undergo thoracotomy.

Of the 68 patients in whom primary malig-

THE IOWA MEDICAL FOUNDATION HAS DESIGNATED THIS ARTICLE AS THE HENRY ALBERT
SCIENTIFIC PRESENTATION FOR THE MONTH OF MAY 1982

TABLE I
PRIMARY MALIGNANCY

68 Patients	
23 Positive	(33.8%)
33 Squamous	
5 Positive	(15.1%)
27 Adenocarcinoma	
10 Positive	(41.6%)
11 Anaplastic	
8 Positive	(72.7%)

nant disease was ultimately diagnosed, 33 (48.5%) had squamous carcinoma, 24 (35.3%) had adenocarcinoma, and 11 (16.2%) had anaplastic (oat cell or large cell) carcinoma. Overall, 23 (33.8%) of the mediastinoscopies in this group showed metastasis to the mediastinal nodes (see Table I). Twenty-two of these patients were spared an unnecessary thoracotomy. One patient underwent a subsequent thoracotomy for drainage of an abscess and biopsy of hilar nodes. Of the 45 patients with negative mediastinoscopies, 44 underwent thoracotomy. Three patients were unresectable because of metastatic disease. Therefore, mediastinoscopy successfully predicted resectability in 41 of 44 patients (93%).

Of the 33 patients with squamous cell carcinoma, only 5 had positive mediastinoscopies. Two of 6 patients who had enlarged mediastinal or hilar nodes on chest x-ray had positive mediastinoscopies. None of the 16 patients with peripheral masses had positive mediastinoscopy. Three of 10 with infiltrates or atelectasis had positive mediastinal nodes. One patient who had recurrent squamous carcinoma at a tracheostomy site had a negative mediastinoscopy.

Of the 24 patients with adenocarcinoma of the lung, all 4 with enlarged mediastinal or hilar nodes on chest x-ray had positive mediastinal nodes. Five of 19 patients with peripheral masses had mediastinal node involvement. One patient with an infiltrate also had positive mediastinoscopy.

Of the patients with anaplastic carcinoma, 8 of 9 with enlarged hilar or mediastinal nodes on x-ray had positive mediastinoscopies. Neither of the 2 patients with peripheral masses had mediastinal node involvement.

Four additional patients underwent mediastinoscopy and were subsequently proven to have pulmonary metastases. The 2 patients in

whom mediastinoscopy was negative, had thoracotomies with findings of metastatic rectal cancer and metastatic malignant melanoma. One patient had negative nodes biopsied during mediastinoscopy, but supraclavicular nodes palpated during mediastinoscopy and biopsied through a second incision were positive for breast cancer. One patient had metastatic renal cell carcinoma diagnosed at mediastinoscopy.

There were no deaths attributed to either mediastinoscopy or to the anesthetic in this series. There were no major complications. The only minor complication was a small wound hematoma.

DISCUSSION

The lymph nodes which are accessible to mediastinoscopy are the paratracheal and tracheobronchial lymph nodes. The tracheobronchial nodes are divided into the inferior tracheobronchial nodes located subcarinally and the superior tracheobronchial nodes located in the angle between the trachea and the mainstem bronchus of either side. The paratracheal nodes form the link between the superior tracheobronchial nodes and the scalene nodes on the right. The left paratracheal nodes are somewhat fewer in number and form a less consistent link between the left superior tracheobronchial nodes and the left scalene nodes.

Nohl-Oser³ has outlined the pattern of mediastinal metastases of lung cancer. Right lung lesions metastasize first to the right superior tracheobronchial nodes, then to the paratracheal nodes, and later to the right scalene nodes. Right upper lobe lesions metastasize rarely to the inferior tracheobronchial nodes, while right lower lobe lesions frequently spread by this route. Overall, right lung lesions metastasize to contralateral nodes only 3% of the time.

Lymphatic spread of left lung lesions is completely different from that of right sided lesions. Contralateral spread occurs at least as frequently as ipsilateral spread. This phenomenon is explained primarily by left lower lobe metastasis to the inferior tracheobronchial nodes and subsequently to the right superior tracheobronchial nodes. Left paratracheal metastases occur less frequently than left scalene node spread. This paradox is explained by the spread via the anterior mediastinal

nodes on the left and then to the scalene nodes. The anterior mediastinal nodes are not accessible during mediastinoscopy because they lie anterior to the great vessels.

As mentioned earlier, the technique of mediastinoscopy was first described by Carlens in 1959. Under general anesthesia with patient in the supine position and the neck extended, a transverse incision is made 2 cm above the sternal notch and carried down through the subcutaneous and platysmal layers. The strap muscles are separated in the midline and retracted laterally. The dissection is carried down through the pretracheal fascia. Blunt dissection with the index finger is then used to develop a plane just anterior to the trachea. Palpation for masses is helpful during the blunt dissection. The mediastinoscope (Figure 1) is inserted and blunt dissection with a long suction-cautery device is carried out in the right and left paratracheal, superior tracheobronchial and inferior tracheobronchial areas. Any suspicious masses of nodes are aspirated with a long needle to avoid possible problems with major vascular structures. Biopsy is performed using biopsy forceps. While specimens are processed for frozen section, bleeders are cauterized and the wound is packed with a sponge for several minutes. The sponge is removed, hemostasis is again checked and the platysma and skin layers are then closed.

Indications for mediastinoscopy in this series include: 1) staging for proven primary carcinoma of the lung to determine resectability; 2) undiagnosed mediastinal or hilar adenopathy on chest x-ray; 3) undiagnosed peripheral masses or persistent infiltrates on chest x-ray which are suspicious for malignancy.

Relative contraindications include: 1) documented distant metastases; 2) evidence of superior vena caval obstruction; 3) bleeding disorders, unless correctable; 4) previous mediastinal irradiation. Trinkle⁴ has however used mediastinoscopy to successfully diagnose 11 patients with superior vena caval syndrome without any complications.

Ashbaugh,⁵ in a collected series of 6,543 patients, reported a mortality of 0.09%. Only deaths attributed to the mediastinoscopy or anesthesia were included. The morbidity rate was 1.5%. Hemorrhage, pneumothorax and recurrent nerve injury represent the most com-

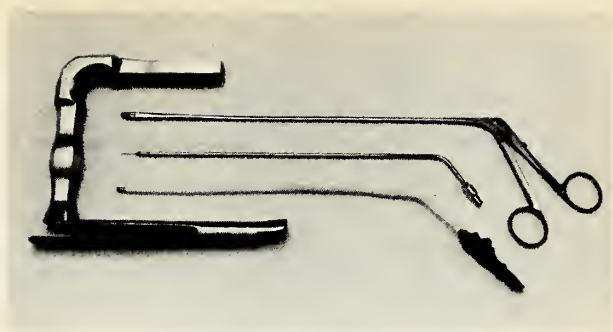


Figure 1. The mediastinoscope is shown at left. From top to bottom at right, the biopsy forceps, aspirating needle and suction cautery device.

mon complications. Less common complications include infection, tumor implants, and phrenic nerve injury. As mentioned earlier, there were no deaths and no major complications attributed to mediastinoscopy in this series.

CONCLUSION

Mediastinoscopy is a safe, effective method of diagnosing both benign and malignant diseases of mediastinal nodes and of staging patients with carcinoma of the lung to diminish the number of unnecessary thoracotomies. It is more effective in patients with anaplastic carcinoma or adenocarcinoma and in patients with mediastinal or hilar adenopathy on chest x-ray. It is less effective in patients with peripheral pulmonary masses, especially those caused by squamous cell carcinoma. It is of little benefit in patients with left upper lobe lesions, unless there is evidence of mediastinal or hilar adenopathy on chest x-ray. The use of mediastinoscopy has resulted in a 93% resectability rate in patients undergoing thoracotomy for primary carcinoma of the lung. Mediastinoscopy prevents unnecessary thoracotomy in 32% of patients with lung cancer in this series.

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Papillary Adenocarcinoma Of the Endometrium With Psammoma Bodies

JAMES A. ROBERTS, M.D.,
SAMUEL LIFSHITZ, M.D., and
CHARLES E. PLATZ, M.D.
Iowa City, Iowa

Psammoma bodies are a common finding in many neoplasms. In gynecology, the ovary is the most common source. In rare situations, psammoma bodies develop in association with papillary adenocarcinoma of the endometrium. The case reported here is the ninth such tumor described in the English literature. A review of the literature indicates a remarkably high association with deep myometrial invasion.

PSAMMOMA BODIES (calcospherites) are a common histologic finding in neoplasms arising in the ovary, thyroid and meninges. Neoplasms arising in the lung, fallopian tubes and pancreas have also occasionally demonstrated these structures. In nearly all cases, the tumor histology is that of a papillary adenocarcinoma. In gynecology the major site of such tumors and the most common source of psammoma bodies is the epithelial tumors of the ovary. In rare situations psammoma bodies are seen in a papillary adenocarcinoma of the endometrium. The case reported here represents the ninth case reported in the literature and the first to have it in association with polycystic ovaries.

CASE REPORT

The patient is a 37-year-old, obese G2 P1011 who has been followed by the University of

Iowa Hospitals and Clinics since birth. Her gynecologic problems began in 1965 at the age of 22 when she developed irregular menses. Later that year she had a term pregnancy which was complicated by mild preeclampsia. She next presented at age 29 with hypertension (BP 160/110), obesity (Wt: 122 kg), oligomenorrhea and hirsutism. A diagnosis of polycystic ovaries was made. She then presented at age 35 with an 18-month history of vaginal spotting. An endometrial biopsy revealed endometrial hyperplasia. She was placed on 10 mg of Medroxyprogesterone acetate daily. Semi-annual endometrial sampling revealed atrophic endometrium. She discontinued this medication 18 months later at the time of a surgical gastric bypass. Three months postoperatively an endometrial biopsy revealed few glands with focal decidual reaction and many psammoma bodies (Figure 1A). A fractional D&C and laparoscopy were performed. The ovaries appeared enlarged, cystic and sclerotic. Peritoneal washings obtained at this time were negative. The endometrial curettings contained a well-differentiated

The authors are associated with the Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, and Department of Pathology, University of Iowa Hospitals and Clinics. This study was supported by a Junior Faculty Clinical Fellowship of the American Cancer Society held by Dr. Roberts. Since the paper was prepared Dr. Roberts has become an assistant professor, Division of Gynecologic Oncology, University of Michigan Medical School.

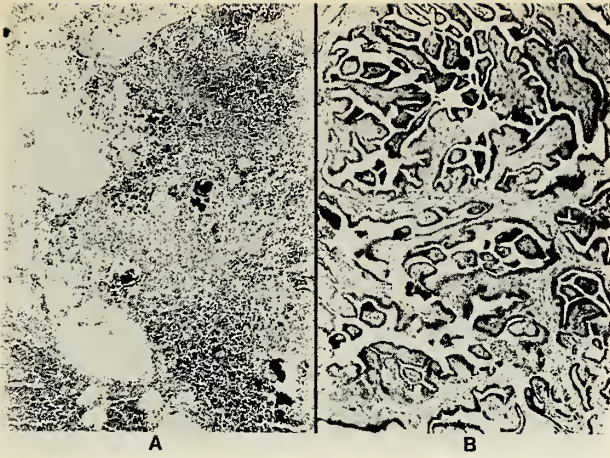


Figure 1. A: Endometrial biopsy showing few glands and psammoma bodies. B: Well-differentiated papillary adenocarcinoma obtained by D&C (Hematoxylin and eosin. $\times 80$).

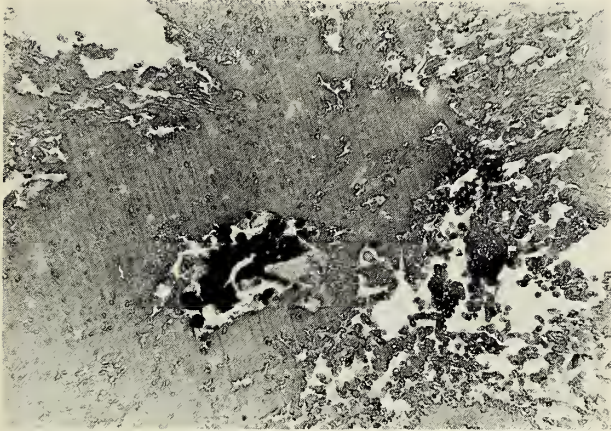


Figure 3. Myometrial involvement with well-differentiated papillary adenocarcinoma with psammoma body formation (Hematoxylin and eosin. $\times 80$).

papillary adenocarcinoma (Figure 1B). Two months later she underwent a total abdominal hysterectomy, bilateral salpingo-oophorectomy, pelvic lymph node sampling and peritoneal washings. Postoperatively she received a full course of radiation therapy to the pelvis. She is asymptomatic with no evidence of disease one year after treatment.

PATHOLOGICAL EXAMINATION

The uterus was of normal size and shape. The ovaries were both enlarged (approximately $4 \times 2.5 \times 2$ cm) and multicystic (Figure 2A). The endometrial cavity was filled by a $4 \times 2 \times 0.5$ cm tan exophytic mass (Figure 2B). Sections

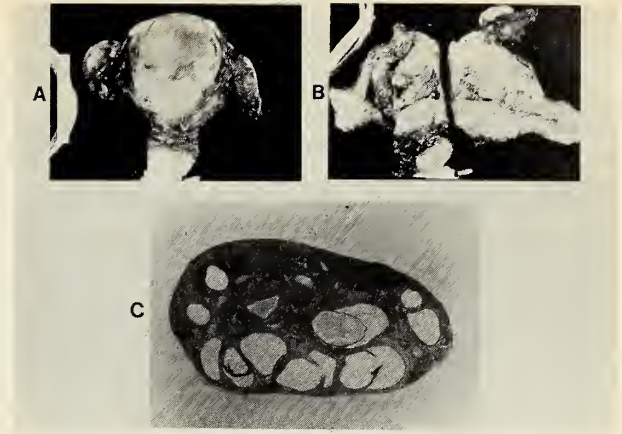


Figure 2. Surgical specimen with: A: normal sized uterus and slight ovarian enlargement; B: open uterine cavity filled with the tumor mass; C: cross-section of ovary showing only multiple cysts.

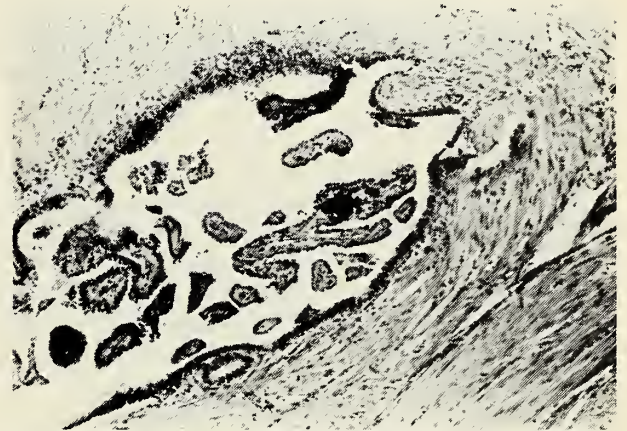


Figure 4. Peritoneal washings obtained at the time of hysterectomy showing adenocarcinoma cells and several psammoma bodies (Papanicolaou method $\times 200$).

through the mass and its underlying myometrium revealed a well-differentiated papillary adenocarcinoma which invaded the outer third of the myometrium (Figure 3). Dark purple laminar psammoma bodies were found throughout the myometrium, both in areas containing tumor and in those with no obvious tumor. A cross section of the ovary shows multiple cystic structures (Figure 2C). The peritoneal washings revealed clumps of tumor cells in association with psammoma bodies (Figure 4). The pelvic lymph nodes showed reactive sinus histiocytosis.

(Please turn to page 198)

DISCUSSION

The mechanism involved in the production of psammoma bodies in connection with neoplasms is not well understood. Three mechanisms for their formation have been postulated: 1) that they result from tumor necrosis induced by chemotherapy or radiation therapy;² 2) they are the products of basic proteins and acid mucopolysaccharides secreted within cells;⁴ and 3) that a cell type found in papillary adenocarcinomas contains concentrically arranged juxtanuclear fibrils which form the framework for the deposition of calcium apatite. These cells are thought to be histologically similar to cells found in meningiomas. The continued deposition of these secretory products results in complete destruction of the cells and formation of a psammoma body.

With the addition of the present case there have now been 9 cases of pure endometrial adenocarcinoma with psammoma bodies reported in the English literature (Table I). A

review of the literature²⁻⁶ shows that 7 out of 9 cases reported were associated with deep myometrial invasion. It is well recognized that myometrial invasion is more common in poorly differentiated tumors as well as advanced disease, but it is interesting to note that of the 7 cases reported in the literature with deep myometrial invasion, 4 were in patients with well-differentiated tumors and 2 were in moderately differentiated tumors. Only 2 cases were more advanced than stage II disease. Although the number of cases reported is too small to draw any conclusions, the association of deep myometrial invasion in these well-differentiated tumors and early lesions is striking.

Adenocarcinoma of the endometrium with myometrial invasion is associated with a high incidence of pelvic and para-aortic lymph node metastases and with poor prognosis.¹ In this group of patients there was 1 postoperative death. Of the 8 patients that can be evaluated for survival, 2 died of disease and 2 were listed

TABLE I
Summary of Reported Cases of Pure Endometrial Adenocarcinoma With Psammoma Bodies

Authors	Age (Yr.)	Endometrial Pathology	Myometrial Invasion	Ovarian Pathology	Treatment	Outcome
Korpos & Bridge	55	Adenocarcinoma. G1	Deep		Supracervical Hyst. BSO Postop Radium	DOD — 14 yrs.
Spjut, et al	54	Adenoco. G1	Deep	Tumor Implants	TAH-BSO	LWD — 6 mo.
Homeed & Morgan	77	Papillary Adenoco. G3	None	None	Preop Radium TAH-BSO	Postop Death
Factor Case #1	61	Papillary Adenoco. G3	Deep	None	TAH-BSO Postop R.T.	NED — 4 mo.
Case #2	66	Papillary Adenoco. G2	Deep	Fibroid	Melpholol, Cytoxan, 5-FU, Methotrexate	DOD — 11 mo.
Case #3	60	Papillary Adenoco. G2	Significant Invasion	None	Preop R.T. TAH-BSO	NED — 2 mo.
Livolsi Case #1	73	Papillary Adenoco. G1	No Tumor In Specimen	None	Preop Radium Radical Hyst.	NED — 4 yrs.
Case #2	64	Papillary Adenoco. G2	Deep	None	Preop Radium TAH-BSO Postop R.T.	LWD — 14 mo.
Present Report	37	Papillary Adenoco. G1	Deep	Polycystic Ovaries	TAH-BSO Postop R.T.	NED — 1 yr.

G1: Well Differentiated; G2: Moderately Differentiated; G3: Poorly Differentiated; DOD: Dead of Disease; LWD: Living With Disease; NED: No Evidence of Disease.

as having advanced disease at the time of report. The 4 remaining patients have had an average of 16 months (2-48) follow-up. It can be expected that additional tumor related deaths will occur in this group. The experience of Karpas and Bridge⁴ suggest that long-term follow-up is necessary to uncover all the tumor related deaths in this disease.

The incidence of endometrial adenocarcinoma is known to be considerably higher in patients with polycystic ovary disease, but to our knowledge this is the first reported case to present in association with psammoma bodies.

Since the presence of psammoma bodies in endometrial cancer is extremely rare (this being the only case on record of over 900 endometrial adenocarcinomas seen at The University of Iowa in the last 25 years), when such a case presents, it must be determined that this disease is not arising in the ovaries. Therefore, careful evaluation of the ovaries is necessary to rule out this organ as the primary site of the lesion. If the ovaries are normal additional sites

such as the pancreas, lungs, colon and thyroid must be evaluated. Only after all these sites are found to be normal, can a primary endometrial adenocarcinoma with psammoma bodies be diagnosed. When one is confronted with such a case, the frequent association of deep myometrial invasion noted in the literature should be kept in mind and looked for. Additional cases of endometrial cancer with psammoma bodies need to be reported in order to determine the true prognostic significance of these histological findings.

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COMMENTING EDITORIALY

MARION E. ALBERTS, M.D.
SCIENTIFIC EDITOR

USE THE CRUTCH WISELY

ANXIETY is ever present. There has never been a time through all generations when man has been free of fear; at total ease as to his welfare and safety. Man has had to suffer pain and humiliation; there remains always some form of threat to survival.

Through all these trials and tribulations potions have been offered to ease the anxiety and pain. Savages learned of the soporific and anesthetic effects of brews concocted from certain roots and leaves. Modern pharmacology has devised numerous preparations to aid sleep, avoid sleep, allay anxiety, alleviate pain, diminish worry, and transfer one's mind from fear to a tranquil state.

It is appropriate for intense pain and suffering to be alleviated by the use of drugs. Yet, we have to admit, there have been blatant abuses in this area. Our culture has become too dependent on drugs to mesmerize the unpleasant vicissitudes in life. I do not scorn the legitimate use of drugs in patients where they serve to lower the deleterious effects of illness, but the use of such drugs can be misdirected to create a state of dependency that can become unfortunate for all concerned — individually and for society as a whole. We have drugs to sleep better; then others to become more alert the next day; others to alleviate worry, and many to minimize pain. There is fierce competition to gain maximum use of these drugs. Key words such as "double strength," "faster acting," and the like are prominent in advertis-

ing. It is no wonder that man grasps for a capsule or pill when the "boat is rocked."

Is there anything wrong with having to face reality? Life has its normal and natural trials and tribulations. It should be normal and natural to stay alert to face what life has to offer. There should be no need to hide behind the false veil of drugs.

OUR SOCIETY has become one of "instant gratification." We want the best, the easiest way possible, and now. If the route through life is too tedious, a tranquilizer will solve the problem. Imagine the mother asking for tranquilizers for her child entering kindergarten to ease the anxiety of that day away from the mother. In fact, you need not imagine it; it happened. She did not get any.

This type of thinking goes back as far as the neonatal period. Have you heard that babies are not supposed to cry? They are "*tranquilized*" with a rubber or plastic device. The poor infant sucks on the pacifier thinking some milk is forthcoming. Nothing there; just a dummy nipple. Such trickery certainly cannot engender much trust regarding the intentions of the parent. I contend that an infant (1) who is well, (2) whose diaper is empty, (3) whose stomach is properly filled, (4) who is warm and protected and loved, really cannot be too bad off. Is he really crying, or just making noises like his older counterpart on the playground? Maybe he "cries" in protest of receiving too much attention. Often we see an older infant screaming during an examination only to grin back at us when the mother takes him into her arms. Sometimes I am sure that grin has a message behind it, such as, "OK, you win this time, but I'll get you later." Aren't they clever? One can't help but love every one of them.

Why this discourse? This thought has undoubtedly entered your mind. It is the urge to be more judicious in the use of drugs to mask the normal problems of life. One does not die from insomnia; a normal amount of worry and anxiety does not shorten life. Grief is a normal reaction and should not be covered by sedatives or tranquilizing drugs. All pain does not require extra strength analgesics or narcotic drugs. Some coughs are actually beneficial to the patient. Judicious use of symptomatic drugs provides a service to the patient and avoids the guilt upon the physician for having caused drug dependency. — M.E.A.

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OUR MAN ON EDUCATION

RICHARD M. CAPLAN, M.D.

THE SINGLE MOST IMPORTANT CHANGE

MY RECENT MAIL contained a most provoking question. I wonder how you'd have responded. Here's the background:

The Association of American Medical Colleges has just embarked on a very large two-year project seeking to assess and (probably) modify what is being called "the general professional education of the physician," referring to the educational process from high school graduation to medical school graduation. Some spokesmen feel the long-range result of this inquiry might produce changes as important to the system of medical school education as the renowned Flexner Report of 1910. And that one was indeed major — it led to the closing of many inferior schools which were not able to link themselves to a major University, to establishing high quality laboratory and clinical experiences for students, and to engaging in rigorous biomedical scientific training that provided the base for an age of immense growth, specialization and leadership of American medical education.

The directors of the present study wrote an excellent 60-page descriptive summary that they distributed to a great many of those who carry responsibilities for this educational effort, from University presidents on down. At

Dr. Caplan is Associate Dean for Continuing Medical Education at The University of Iowa College of Medicine.

the end of the summary appeared a long questionnaire seeking the reader's reaction to many questions prompted by the text's description of present circumstances and identification of problems.

They wonder, for example: whether major teaching hospitals have grown too complex and specialized to provide a general professional education to students in the junior clerkships; whether residents place excessive reliance on students to accomplish the work of the service, and faculty place excessive reliance on residents for teaching; whether evaluation methods ensure that deficiencies in students' knowledge, skills, and attitudes are identified; whether specific pre-medical requirements in organic chemistry, physics and biology are now obsolete; and so on. At the end of that questionnaire came a really tough "bottom-line" question: "There are myriad possibilities for changes to improve the general professional education of the physician. What is the single most important change that should be undertaken?"

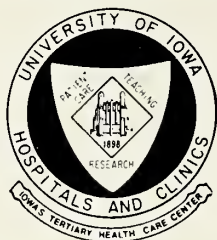
"Flexibility — to permit individual interests, styles, pace, and attainment of a mastery of skills to become dominant — to teach and practice the kind of educational independence needed for efficient and effective life-long learning."

I'VE debated with myself whether to tell you what I finally wrote as my own answer, because I'd like you to feel the challenge of that powerful question. I could suggest you "turn to page xyz for my answer," or "see this column next month for my answer." No, I'll tell you here, but I do challenge you to formulate your own answer to that question and then compare it to mine:

"Flexibility — to permit individual interests, styles, pace, and attainment of mastery of skills to become dominant — to teach and practice the kind of educational independence needed for efficient and effective life-long learning."

If your answer was much different, I'd be glad to hear from you. If it was about the same, then you have the satisfaction of having proved how great minds tend to "run on the same track."

DRUG THERAPY REVIEW



UNIVERSITY OF IOWA HOSPITALS AND CLINICS

REYNOLD SPECTOR, M.D., Editor

VERAPAMIL

VERAPAMIL is a synthetic papaverine derivative. It was first introduced in the 1960s as a vasodilator for use as an antianginal agent. Verapamil was initially felt to be a beta-blocking agent. Subsequent studies revealed it was an inhibitor of transmembrane calcium fluxes.

Calcium plays an essential role in many biologic functions. In cardiac tissue, calcium is involved in the origin of the cardiac action potential and in coupling of electrical excitation to contraction. The action potential is a composite of ionic currents due mainly to sodium, potassium, and calcium flux across the cell membrane. A fast initial current is due to rapid movement of sodium into the cell which produces phase 0 of the action potential. Once the cell has been depolarized from -90 mV to -40 mV the second inward current becomes operative. The ionic species comprising the second current are calcium and sodium, with the former being the predominant ion. The slow current maintains depolarization during the plateau phase or phase 2 of the action potential and releases intracellular calcium to bind actin and myosin filaments together to cause contraction.

This information for Iowa physicians is furnished and sponsored by the University of Iowa Hospitals and Clinics.

The slow current is inhibited by calcium channel blocking agents: verapamil, nifedipine, perhexiline, and diltiazem. Slow channels appear to be present in all cardiac tissues and in vascular smooth muscle. In addition, they play a prominent role in generating action potential in SA and AV nodes. They may also be important in generation of action potential in diseased tissues.

Calcium channel blockade with verapamil results in specific cardiovascular effects. These include: (1) a negative chronotropic effect in the sinus node; (2) delayed conduction in the AV node; (3) a negative inotropic effect; and (4) arteriolar vasodilatation. The negative chronotropic effect may be partly overcome by reflex baroreceptor stimulation secondary to peripheral vasodilatation. The negative inotropic effect is minimized by vasodilatation with afterload reduction.

EFFICACY

Because of its diverse cardiovascular effects, verapamil has been used in various clinical conditions. Its efficacy has been demonstrated as: (1) an antiarrhythmic agent in patients with supraventricular tachycardia, atrial flutter, and fibrillation; (2) an antianginal agent in patients with classic or variant angina; and (3) an agent to improve exercise tolerance in patients with hypertrophic cardiomyopathy.¹⁻⁴ Efficacy has not been demonstrated for ventricular arrhythmias.¹

ANTIARRHYTHMIC AGENT

Paroxysmal Supraventricular Tachycardia

Verapamil has found its greatest success in the treatment of PSVT. A randomized double-blind crossover technique was used to evaluate the effect of intravenous verapamil with placebo in patients with PSVT.⁴ During the double-blind portion of the study 48% converted to sinus rhythm with low-dose verapamil (0.075 mg/kg), versus 4% with placebo. Nonresponders were given a second higher dose. Seventy-nine percent responded to verapamil.

In nonrandomized studies, intravenous verapamil has been found to be effective in patients with PSVT due to AV nodal reentrant tachycardia, reciprocating tachycardia involving an extra nodal bypass pathway, and SA nodal reentry. Nodal reentrant tachycardia is terminated by blocking antegrade or retrograde AV nodal conduction.⁵ In reciprocating

tachycardia, conduction through an extranodal pathway may not be affected; in this case AV nodal block results in tachycardia termination.

In our experience, chronic oral verapamil will prevent recurrent AV nodal reentrant tachycardia in a majority of patients. In patients with extranodal pathways, chronic oral verapamil is of limited or no help in prevention of recurrent tachycardia.

Atrial Fibrillation and Flutter

Twenty-eight patients with atrial flutter or fibrillation were randomized in a double-blind fashion to intravenous verapamil or placebo.⁹ If the ventricular rate did not slow after low-dose verapamil, high-dose verapamil was given. A decrease in ventricular rate of at least 15% occurred in 95% of verapamil treated patients and only 14% of controls. Conversion to sinus rhythm occurred, respectively, in 14 and 15% of patients with atrial flutter and fibrillation after verapamil.

Oral verapamil has been shown to be effective for control of ventricular response in chronic atrial fibrillation.² Verapamil can be used in combination with digoxin in this group of patients for maximal heart rate control. Such usage, however, must be considered in light of a report that digoxin levels may be elevated by verapamil (much the same as quinidine).¹⁵ In combination with quididine, verapamil may maintain normal sinus rhythm in patients in whom both drugs used singly did not maintain sinus rhythm (unpublished observations).

ANGINA

Verapamil produces vasodilatation in coronary and peripheral vascular smooth muscle, and it also decreases myocardial contractility. These effects combine to improve oxygen demand/supply ratios in ventricular myocardium.

A controlled double-blind crossover trial compared verapamil 360 mg/day and placebo in 28 patients with exertional angina.⁸ Efficacy was assessed with treadmill testing, angina frequency, and nitroglycerin consumption. Statistically significant increases in mean exercise time and decreases in nitroglycerin consumption and anginal frequency occurred in the treatment group. In a controlled double-blind study verapamil 360 mg/day was as effective as propranolol 300 mg/day in controlling angina.³

Verapamil has been suggested for patients with variant angina. Nitrates are frequently not completely effective in controlling spasm. Patients with ergonovine-inducible spasm were treated with oral verapamil, nifedipine, and diltiazem.¹⁰ Seventy-four percent had negative repeat testing or required higher ergonovine doses to induce spasm after oral verapamil treatment. Verapamil was no more effective than nifedipine or diltiazem.

HYPERTROPHIC CARDIOMYOPATHY

Many patients with symptomatic hypertrophic cardiomyopathy are intolerant of beta-blockers, and surgical therapy carries a 5 to 10% mortality rate. Exercise capacity in 19 patients with hypertrophic cardiomyopathy was studied in a randomized double-blind technique to compare placebo, propranolol (160-320 mg/day), and verapamil (320-480 mg/day).¹¹ A significant increase in exercise capacity occurred with both verapamil and propranolol. On chronic verapamil therapy, 8 patients showed further significant increase in exercise tolerance.

INDICATIONS APPROVED BY THE FDA

FDA-approved indications for the intravenous form of verapamil are: (1) rapid conversion to sinus rhythm of PSVT including those associated with an accessory bypass tract; and (2) temporary control of rapid ventricular response in atrial flutter and fibrillation. The oral form has not been released at the time of this printing.

PHARMACOKINETICS

The pharmacokinetics differ between the oral and intravenous route of administration. Absorption is 92 to 95% after oral dosing. The absolute bioavailability is only 20%, due to extensive first-pass metabolism of the oral medication. The onset of action after oral administration is 2 hours, with a peak effect at 5 hours. Effects occur in less than 2 minutes, peaking by 10 minutes after intravenous administration. Plasma levels show a biexponential decline. The distribution phase lasts 18 to 35 minutes, while the elimination phase has a half-life of from 3 to 7 hours. Protein binding is 90%.

Verapamil is metabolized by N-dealkylation and O-demethylation. The metabolites appear

(Please turn to page 208)

to have only 5 to 10% of the parent drug activity. Seventy percent of the drug is excreted by the kidney, but only 3% is excreted unchanged. Fifteen percent is excreted via the GI tract.

There have been few studies describing the effect of liver disease on verapamil pharmacokinetics. After intravenous administration in 7 patients with cirrhosis, the beta elimination half-life was 14.2 hours (twice that of normal patients).¹² After oral therapy in these patients peaked, plasma levels were higher and occurred earlier. It was recommended that the intravenous dose be halved and that the oral dose decreased to one-fifth the usual dose in patients with liver disease. No change in protein binding has been found in patients with hepatic or liver disease. Dosage adjustment for chronic renal failure/dialysis have apparently not been determined.

ADVERSE EFFECTS

Nine percent of patients will have some adverse reaction that will require discontinuation in 1 of the 9. Knoll pharmaceutical reports a less than 1.5% occurrence of systemic hypotension, bradycardia, seizures, headache,

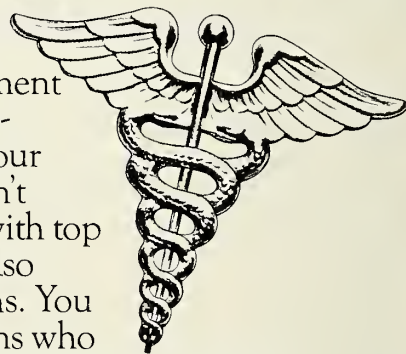
nausea, and abdominal discomfort. A 25% incidence of constipation occurred with long-term oral administration.² In patients with atrial fibrillation and associated Wolff-Parkinson-White syndrome, there have been reports of higher rates of ventricular response, presumably due to shortening of refractoriness of the accessory pathway after verapamil therapy.⁴ Epstein⁶ has reported an increased incidence of bradycardia (11%), second degree AV block (4%), and sinus arrest (2%) among verapamil treated patients with hypertrophic cardiomyopathy. They also reported patients who developed worsening outflow obstruction related to marked drop in blood pressure and patients who developed pulmonary edema presumed to be secondary to drug-induced deterioration of left ventricular function. A case report describes one patient who developed hepatitis and was confirmed on rechallenge.¹³

Contraindications to verapamil use include: severe hypotension, AV block, sick sinus syndrome, and severe congestive heart failure. One contraindication deserves special emphasis, that is, the concomitant use of verapa-

(Please turn to page 210)

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STATE DEPARTMENT/ PUBLIC HEALTH

FUTURE OF CERTIFICATE OF NEED IN IOWA

These remarks were presented by Cooper Parker, director, Office for Health Planning and Intergovernmental Relations, Iowa State Department of Health, at a seminar in Indianapolis. The seminar was held under the auspices of the Institute for Health Planning on November 18 and 19, 1981, and concentrated on current activities and future plans for state and local health planning. Because of the interest in health planning activities shared by the Iowa medical community, portions of Mr. Parker's remarks are included here:

IT is likely that in the State of Iowa, the certificate of need law will be continued, because the fees that have been charged the applicants support the program. There are also supporters in the Iowa General Assembly who see the program as a defensive mechanism against cost escalation. Rate review is not a likely prospect simply because most hospitals in Iowa are local governmental institutions and rates are kept artificially low.

We are currently considering changes which we will seek from our legislature in January. These changes include bringing our review thresholds into compliance with the higher levels now identified in the federal legislation. By reducing the number of reviews to those most likely to have a large dollar impact, staff will be able to compensate for some of the loss

of Health Systems Agency assistance. By soliciting more active involvement from affected business-labor groups or insurance carriers, we will rely more heavily upon volunteer input from those who pay the bills.

On the Future of Cost Containment Efforts in Iowa:

The next step in our cost containment plans in Iowa is to place less reliance upon the "hard-core" type of regulation, such as certificate of need capital controls, and more reliance on the "soft-core" form of regulation. That type is more subtle and more difficult to engineer. It means moving more toward a negotiating posture with the institutions, discussing and encouraging revision of projects before applications are submitted to the State. It also involves changing the environmental factors that motivate capital and cost expansion, such as changing hospital utilization levels, shifting markets, changing reimbursement incentives and ultimately changing consumer expectations.

On Local Input to Health Planning Decisions:

The State sees local input to the review process as very important, and if federal dollars are available for local planning, with the state having discretion on how to use them, the state will funnel that money to local groups and not keep it at the state level. Those groups might be existing Health Systems Agencies, local coalitions of county government, local boards of health, or other organizations which grow to meet the need for community health planning.

On the role of business and labor in health planning:

The Iowa Health Systems Agency has formed a new corporation. Seats on the board of the new corporation will be offered to representatives of the business and labor alliances. The benefit to business and labor is that they get plugged into the policy making process of whatever local planning there is without having to develop an elaborate organizational structure themselves. The benefit to the Health Systems Agency is that it can use the political clout that business and labor have.

It looks as if this new corporation will perform special studies, do data analysis, and primarily focus on implementation. It will be involved in educating hospital trustees, business and labor members. We hope the developing symbiotic relationship will continue between

(Please turn to page 210)

STATE DEPARTMENT/PUBLIC HEALTH

(Continued from page 209)

planners and implementers. The state would look to those new alliances or possibly subarea councils to provide input to the development of the State Health Plan.

On the Future of Public Health Programs in Iowa:

Beyond 1982, the Department of Health will go to the Legislature with proposals to re-align programs more closely with locally determined needs. We have begun by sponsoring department-wide, structured workshops and task forces aimed at producing long-range department plan. We have begun developing status indicators that will more precisely measure the effectiveness of public health programs.

DRUG THERAPY REVIEW

(Continued from page 208)

mil and intravenous beta-blockers. Complete heart block and ventricular asystole have been reported.⁷ Verapamil should also probably not be used in patients on oral beta-blockers. The negative inotropic effects of both compounds administered together is greater than either used alone.¹⁴

When serious side effects occur or in overdoses of verapamil, pharmacologic intervention may be indicated. Treatment may include intravenous calcium, isoproterenol, norepinephrine, atropine, and cardiac pacing. In patients with atrial fibrillation and Wolff-Parkinson-White syndrome who develop facilitated conduction, treatment can include D/C cardioversion, procainamide, or lidocaine.

DOSAGE RECOMMENDATIONS/COSTS

The recommended dosage for cardioversion of PSVT with verapamil is 0.075 to 0.15 mg/kg. The usual dose in the adult is 5 to 10 mg IV. It is given over one to two minutes. A second dose can be repeated in 30 minutes. EKG and blood pressure should be monitored during treatment. The usual continuous infusion rate is 0.005 mg/kg/min. The cost is \$10 per 5 mg.

SUMMARY

Verapamil is a very effective drug for treatment of paroxysmal supraventricular tachycar-

On Citizen Input in the Planning Process:

The Statewide Health Coordinating Council will provide broad-based citizen input that will reflect acceptance and consensus on the proposals. The Board of Health will provide the administrative oversight to the allocation of our service resources. Our State Health Planning and Development Agency staff has already devoted hundreds of hours to the tasks of impact evaluation and needs assessment.

Citizens and providers are encouraged to attend meetings of the Statewide Health Coordinating Council, held quarterly. For information on times and sites call or write: Office for Health Planning and Intergovernmental Relations, Iowa State Department of Health, Lucas State Office Building, Des Moines, Iowa 50309 (515) 281-4340.

dia. Its rapid action and minimal side effects make it an acceptable alternative to present pharmacologic management of PSVT. It has been shown to have efficacy in the treatment of angina, hypertrophic cardiomyopathy, and chronic atrial fibrillation. — Rodney Zeitler, M.D., Fellow in General Internal Medicine; and James Martins, M.D., Assistant Professor of Medicine.

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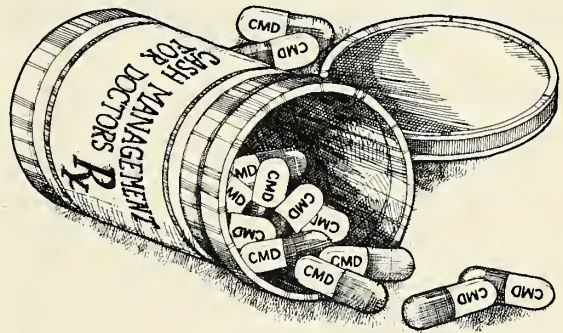
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March 1982 Morbidity Report

Disease	Mor. 1982 Total	1982 to Date	1981 to Date	Most Mar. Cases Reported From These Counties
Amebiasis	8	27	2	Johnson, Boone
Brucellosis	1	1	0	Stary
Chickenpox	1244	3140	4115	Linn, Polk
Compylabacter	13	50		Dubuque, Block Hawk, Polk
Cytomegalovirus	7	9	6	Johnson
Eaton's Agent infection	18	63	8	Polk, Linn, Sioux
Encephalitis, virol	4	6	4	Dubuque, Pottawottamie
Erythema infectiosum	50	90	350	Wopello, Polk, Muscotine
Gastroenteritis (GIV)	1981	5287	9030	Linn, Polk, Pottawottomie
Giordiosis	8	27	10	Scott, Polk
Hepatitis, A	7	23	104	Wopello
Hepatitis, B	7	21	20	Polk
Hepatitis type unspecified	3	6	17	Appanoose, Boone, Pottawottomie
Non A, Nan B	0	4		
Herpes Simplex	38	78	44	Johnson, Polk, Linn
Herpes Zoster	1	4	2	Linn
Histaplozmosis	1	8	3	Shelby
Infectious mononucleosis	33	80	123	Linn, Polo Alto, Block Hawk
Influenza, lob canfrmed	8	9	178	Siaux
Influenza-like illness (URI)	7581	16997	39478	Linn, Polk, Johnson
Meningitis				
oseptic	2	6	18	Dubuque, Linn
bacterial	15	40	32	Johnson, Polk
meningococcol	1	4	9	Clinton
Mumps	5	15	28	Linn
Pertussis	0	0	2	
Rabies in onimols	28	94	193	Linn, Tamo
Rheumatic fever	1	2	5	Dallas
Rubello				
(Germon meosles)	0	0	0	
Meosles	0	0	1	
Salmonellosis	34	69	46	Polk, Dubuque, Linn
Shigellasis	4	13	11	Corroll
Taxic Shock Syndrome	2	5		Baone, Muscatine
Tuberculosis total ill	11	25	28	Block Hawk, Palk, Woodbury
bact. pos.	5	18	17	Scottered
Venereol diseases:				
Ganorrhea	378	1104	1067	Polk, Block Hawk, Linn
Syphilis	4	7	8	Scott, Polk, Woodbury






Laboratory Virus Diagnosis Without Specified Clinical Syndrome: Adenovirus — 1, Clinton, 1, Polk; Guilloin-Borre — 1, Soc; Hookworm — 1, Buchon-
on, 1, Clinton, 5, Scott; Ascariosis — 1, Allomokee, 1, Cherokee, 1,
Humboldt; Coccidiomycosis — 1, Muscotine; ECHO — 2, Clinton; Trichurius
— 1, Jahnson; Molorio — 1, Boone.

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ABOUT IOWA PHYSICIANS

Dr. Robert T. Brown has been installed as president of the Polk County Medical Society; **Dr. John H. Gay** is president-elect; and **Dr. Harold Eklund**, secretary-treasurer. All are Des Moines physicians. . . . **Dr. Tom Smith**, Ames, was guest speaker at a recent meeting of the Boone County Medical Society. Dr. Smith spoke on "Middle Ear Diseases and Tumors of the Parotid." . . . **Dr. Kenneth L. Thompson**, Oakland, believed to be Iowa's oldest active general practice physician, recently was honored at a reception marking his 90th birthday. Dr. Thompson received the M.D. degree and interned at the University of Nebraska School

of Medicine in Omaha. He began his medical practice in Oakland in 1921. Dr. Thompson is a past president of the Pottawattamie County Medical Society and a life member of the Iowa Medical Society. . . . **Dr. Mark Brodersen**, Ames, is the author of an article in the December, 1981, issue of *ORTHOPEDICS* entitled, *The Management of Delayed Union and Non Union of the Tibia*. . . . New officers of the Burlington Medical Center staff are — **Dr. Paul H. Breckner**, chief of staff; **Dr. D. R. McCabe**, chief of staff elect; and **Dr. K. A. Hahn**, secretary-treasurer. Officers of the Des Moines-Louisiana County Medical Society are **Dr. John McGee**, president; **Dr. Koert Smith**, president-elect; **Dr. Dan Clark**, secretary; and **Dr. Gary Smith**, treasurer. All are Burlington physicians.

Dr. Leo Milleman, Ames, was guest speaker at a recent meeting of the Hardin County Medical Society in Iowa Falls. Dr. Milleman spoke on "Cancer of the Prostate." . . . **Dr. Stephen C. Gleason**, Des Moines, recently received the "Outstanding Young Iowan" award for his dedicated work in substance abuse. The



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award is presented annually by the Iowa Jaycees. Dr. Gleason was then nominated as one of the 10 outstanding young men in America. . . . **Dr. Robert T. Melgaard**, Dubuque, recently began a 3-year term on the board of trustees of the American Group Practice Association. Founded in 1949, AGPA works toward keeping group practice at the forefront of health care delivery nationwide. . . . **Dr. Tom Smith**, Ames, was guest speaker at a recent meeting of the American Cancer Society, Iowa Division. Dr. Smith spoke on "The Care of the Laryngectomy Patient." . . . **Dr. Gregory Naylor** recently began the practice of internal medicine in Grinnell. Dr. Naylor received the M.D. degree at the University of Illinois College of Medicine; interned and served his internal medicine residency at St. Joseph's Hospital in Marshfield, Wisconsin. . . . **Dr. John Sunderbruch**, Davenport, was initiated into the Iowa Chapter of Alpha Omega Alpha, medical honor fraternity, at a recent meeting of the AOA in Iowa City. . . . **Dr. Joan Grabenstetter**, Ames, lectured on "Pregnancy After 30," to a group meeting at the YWCA on the Iowa

State University campus. . . . **Dr. Paul Koellner**, Ames, was guest lecturer at an Iowa State University Special Education Seminar. Dr. Koellner talked on "Mental Retardation."

DEATHS

Dr. John A. Thorson, 85, longtime Dubuque physician, died March 11 at Finley Hospital in Dubuque. Dr. Thorson received the M.D. degree and served his ophthalmology residency at New York University College of Medicine. A past staff president of Finley, Mercy and Xavier Hospitals, Dr. Thorson was a member of the American Academy of Ophthalmology and Otolaryngology and a 50-year member of the American College of Surgeons.

Dr. Francis X. Tamisiea, 75, former Missouri Valley physician, died March 9 in Omaha, Nebraska. Dr. Tamisiea received the M.D. degree at Creighton University School of Medicine. He began his medical practice in Missouri



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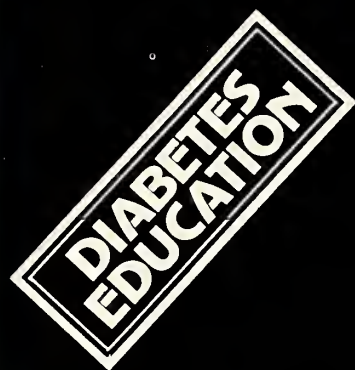
Valley in 1931, retiring in 1981. Dr. Tamisiea was a life member of the Iowa Medical Society.

Dr. William B. Lewis, 84, Webster City, died March 14 at his home. Dr. Lewis received the M.D. degree at Washington University School of Medicine in St. Louis, Missouri. He began his medical practice in Webster City in 1927, retiring in 1969. Dr. Lewis was a member of the American College of Surgeons. Survivors include his wife, Dr. Faye Lewis, Webster City physician.

Dr. John B. Synhorst, 86, Des Moines, died March 19 at his home. Dr. Synhorst received the M.D. degree at the U. of I. College of Medicine. A former member of the surgical staff at the Mayo Clinic in Rochester, Minnesota, Dr. Synhorst was associated with Dr. Ralph A. Dorner, Des Moines surgeon, prior to retiring in 1955. He recently was recognized by the Polk County Medical Society as "Physician of the Year." Dr. Synhorst was a life member of the Iowa Medical Society.

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Nurse-Doctor Syndrome

THE *nurse-doctor stress syndrome* is what we'd like to touch on this month. It's a topic that's been prominent in the news.

In April, readers of the DES MOINES REGISTER were provided some 150-plus column inches of comment on the subject. And the AMERICAN MEDICAL NEWS has had at least four significant articles since the turn of the year.

There's little doubt a *nurse-doctor stress syndrome* is part of our health care milieu. However, as is frequently true, its nature and magnitude are elusive in their evaluation. Each locale, each hospital, each doctor's office has a distinctiveness as to its spirit, purpose and desire to serve. This makes wholesale criticism worth contemplation.

It is to be hoped in this state of 2.5 million inhabitants professional rapport among Iowa nurses and Iowa physicians is acceptably positive in more instances than not. When we compare ourselves nationally on various health care matters the findings generally show we are doing as well or better than others in furnishing citizens with good quality health care service. These accomplishments would hardly seem possible if tensions were as great as media accounts tend to suggest.

The preceding is not meant to sweep aside the merits of addressing interprofessional relationships between doctors, nurses and others in the health care field.

The *nurse-doctor stress syndrome*, as we've called it here, needs to be dealt with forthrightly and informatively. And while the progress is faster or slower than you may desire, depending on your perspective, it is fair to state that the Iowa Nurses' Association, the Iowa Board of Nursing, the Iowa Hospital Association and the Iowa Medical Society have been and are working for an environment where optimum use is made of the knowledge and skills held by the various participants — and appropriate recognition is given to the provision of this time and talent.

Whether pursuit of this goal has been helped by the DES MOINES REGISTER series must be judged independently. A reading and re-reading tends to support a feeling the series focused only sparingly on the most important objective in our whole arena — that of rendering the best possible quality of patient care, given the specific circumstances, the personnel and the facilities. The series seemed to seek out and describe, basically, a series of anomalies. It is gratifying to read of persons enduring taxing schedules to travel great distances for work and education. And it is consequential to learn that a small Iowa community hospital is surviving, if only barely, because a cadre of loyal nurses is willing to do virtually all of the important and mundane tasks.

In reading these vignettes, however, and given the nursing shortage and the merit of reshaping work protocols, missing is an emphasis on the mainstream medical/surgical/nursing activity which is going forward in many Iowa cities. This effort has to depend on a team concept that puts the abilities of health care personnel together in a blend to serve the patient. Hopefully, this is giving each team member a sense of gratification and is helping affirm what many believe about Iowans being a cut above in their capacity for caring.

These comments have an idealistic tone the activists and the advocates of status quo (among them both physicians and nurses) may find inadequate. Whatever, the process of progress will go forward, the need for a more legalistic formatting will continue under consideration. But the popular "bottom line" might be this: Health care providers working together need to look at such goals as:

- *Acknowledgment that patient care is uppermost, and this proceeds best in an environment where there exists openness, concern and a desire for continuous improvement.*
- *Respect for the ability of each individual to bring from his/her education and experience a work contribution that is commensurate with these factors.*
- *Support for the truth that recognition — in word and token — is very nearly as important as the drawing of breath.*

May 1982

Journal of the Iowa Medical Society

THINGS YOU SHOULD KNOW

1982 IMS HOUSE ACTIONS

A brief commentary on 1982 IMS House of Delegates is presented as this month's In the Public Interest. 1982 House actions were also highlighted in the May IMS UPDATE. Hormoz Rassekh, M.D., Council Bluffs, was installed as IMS president May 2 as the House adjourned. His remarks to the delegates and those of retiring President John H. Kelley, M.D., Des Moines, appear in this issue. A more complete summary of the House actions will be included in the July issue.

IMS WASHINGTON CALL

The overriding issue of the federal budget received major attention in Washington, D.C. discussions May 11 and 12 between Iowa congressmen and IMS representatives. Other topics reviewed included health planning and prospects for legislative revamping of the Federal Trade Commission. It is a custom for the Society to make an annual call on the state's senators and representatives.

NURSING RULES

Further attention will be given in June by the state Administrative Rules Review Committee to regulations covering primary functions as proposed by the Iowa Board of Nursing. Some progress has been made in framing acceptable language, but differences appear still to exist. The IMS will be represented at the June 8/9 sessions.

HPCI FORMING

The new Health Policy Corporation of Iowa will have a Pioneer Hi-bred executive, Charles Johnson, as its first president. Physician members of the HPCI board are John Tyrrell, M.D., Manchester; George Baker, M.D., Iowa City, and Jerold LeMar, D.O., Des Moines. An outgrowth of the IHSA, HPCI will encourage local initiative to attain quality health care at appropriate cost through plan development, research, education and influence.

NEW DEPARTMENT HEAD

Robert Corry, M.D., director of the transplant service and professor of surgery at the U. of I., has been named to succeed Sidney Ziffren, M.D., as head of the surgery department. Dr. Ziffren died last fall. Dr. Corry has been at Iowa since 1973 and is widely recognized for his renal transplant work. He is chairman of the IMS Committee on Organ Transplantation.

ABANDON SYPHILIS TEST

Effective July 1, persons making application for an Iowa marriage license will no longer be required to have a serologic test for syphilis. This requirement was abolished by action of the 1982 Iowa General Assembly.

IOWAN HONORED

Roy Pitkin, M.D., chief, U. of I. department of obstetrics/gynecology, will receive the prestigious Joseph A. Goldberger Award this month at the AMA annual meeting in Chicago.

FOUNDATION LOAN ALLOCATION

The student loan allocation of the Iowa Medical Foundation has been set at \$120,000 for the 1982-83 academic year. This amounts to an increase of about \$50,000 over last year. Close to \$1 million has been loaned to Iowans in the 30-plus years of the program.

BOOST FOR AAMA

The American Association of Medical Assistants deserves periodic recognition for valuable service performed at the local, county and national levels. Iowa physicians are reminded of the effective educational program carried on by components of AAMA. A well-trained and informed medical assistant can do much to enhance the management of a physician's office. Information on how your medical assistant can affiliate with a unit of AAMA is available from Society headquarters.

Ship of Medicine Sails Against Disease

JOHN H. KELLEY, M.D.

Des Moines, Iowa

ILLNESS is our greatest fear. There is no escaping it. When ill, we are isolated in a truly frightening way. It is like being marooned alone on a desert island, hoping and praying for a ship that will return us to the mainland of good health.

The crew of the ship we wait for can be compared to the medical profession, the ship itself to the science and art of medicine. The keel of the ship can be likened to the glorious figures of our heritage — Hippocrates, Vesalius, Galen, Harvey, Osler, Fleming, etc. The

These remarks were presented by Iowa Medical Society President John H. Kelley, M.D., on May 1, 1982, at the Annual Meeting of the House of Delegates. Dr. Kelley concluded his term of office May 2, 1982.

ribs are our basic sciences — anatomy, histology, pharmacology, physiology, pathology, etc. The planking and the super structure of our ship represent the primary care specialties and the electronics, the super specialties — radiology, pathology, cardiology, isotopes and oncology, to name a few. We, the doctors, are the crew, trained in a system which demands the best minds to begin with, and subjects them to the most vigorous and prolonged formal training ever devised for any endeavor.

Thinking of ourselves as the crew on a ship making a high seas journey might allow us to see some of our problems in better perspective.

To begin with, no journey is ever undertaken without the threat of storms. Ours is no exception. We should expect storms. In the treatment of disease we have been disciplined

Year's Emphasis — Caring For and About Our Patients

HORMOZ RASSEKH, M.D.

Council Bluffs, Iowa

THIS is a very special day for me, and I thank you for it. You have given me the opportunity to join a long line of distinguished and dedicated individuals who have served as presidents of the Iowa Medical Society. I believe this is the highest honor that can be accorded to a physician in the state. I am proud you have placed your trust in me, and I accept the challenge of leadership with a mixture of humility and positive expectation. I consider this honor as an indication of the democratic

These inaugural remarks were delivered by Dr. Rassekh on May 2, 1982, following his installation as president of the Iowa Medical Society.

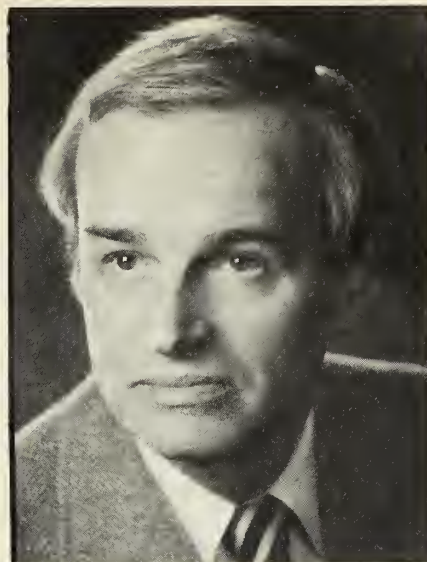
process on which the operation of our society is based. Believe me, 20 years ago, as a new citizen, and a foreign medical graduate, when I attended this House of Delegates for the first time as a county representative I did not envision such an honor. But, I was ready to serve and anxious to learn.

The last 36 hours have been busy ones for all of us. They have been filled with a great many speeches, a little politicking, some enjoyable relaxation and considerable discussion and debate, concluding this morning with action that will help chart the course of the Iowa Medical Society for the coming year. The problems that confront us, and the issues that concern us, have been well articulated during the past day

In comparing the practice of medicine to a voyage on the seas, retiring IMS President Kelley says the ship's physician crew must be resilient against the inevitable storms. He emphasizes that the problems of cost containment, manpower shortage, etc., can and are being solved. He emphasizes that ultimate responsibility for patient care resides with the doctor.

to expect and deal with complications, set backs and even failure of treatment. But, unfortunately, we are not trained to deal with medical-legal problems, deteriorating public esteem, government interference and the politics of medicine. We simply cannot be trained for every contingency. It is here that your Medical Society can be of help. Historically, the Iowa Medical Society was founded to standardize education and combat quackery. This it has done within the profession and much more. The Iowa Medical Society today carries on in a number of ways to represent physicians in areas not directly involving patient care.

Third party payers claim that patients are traveling back to good health first class on a luxury liner when perhaps a troop transport



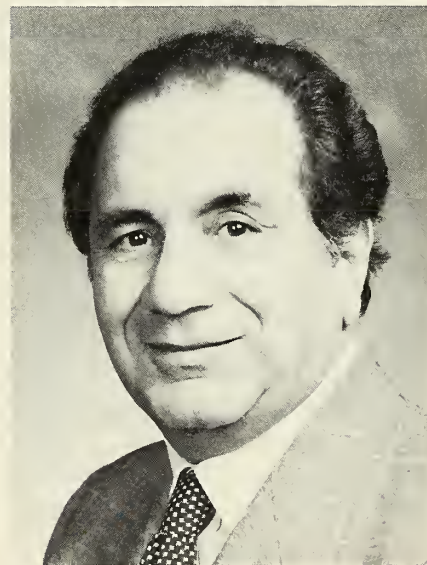
could provide safe transportation. The problem of cost containment is our biggest problem. The public recognizes this and you recognize this. Unfortunately, when tickets are free, everyone goes first class. This is nothing new. You have been saying this in reference committees for years. But, until we sat down on

(Please turn to page 228)

Today's key medical issues will receive careful attention in the coming 12 months. So says the new IMS president. But he said additionally, in his remarks to the 1982 House of Delegates, there is a need for physicians, individually and collectively, to "emphasize the human values of our profession."

and a half. I do not intend to "parrot" them back to you now. I do, however, wish to offer a few personal observations and objectives for your consideration.

First, I acknowledge that in light of present day social and economic conditions, and with escalating health care costs, we, in the medical profession, must think in terms of the best of all possible realities, rather than the best of all possible worlds. I do not propose, however, that practicality must always prevail, and that idealism must be abandoned. Indeed, because of idealism, and also a commitment to high professional, ethical and educational standards, the people of this country enjoy medical care that is the envy of the world. Let us not



accept programs or concepts or compromises that threaten the availability of the excellent quality of care that now exists. As physicians, we must insist on the freedom to exercise individual professional judgement in treating our

(Please turn to page 228)

SHIP OF MEDICINE SAILS AGAINST DISEASE

(Continued from page 227)

cost containment commissions and committees, no one was able to accomplish much. Now we are seeing a new willingness for business and labor to renegotiate what was once non-negotiable; namely, first dollar coverage.

Mr. Robert Burnett, the very articulate and able president of the Meredith Corporation in Des Moines, has recently stated to a group of Iowa physicians that his firm will soon announce a new health care plan which will include more deductibles and co-insurance. If anyone doubts this is cost-effective, read the interim Rand report in the December issue of the *NEW ENGLAND JOURNAL OF MEDICINE*. This paper describes how health insurance cost was cut in half without discouraging necessary health care by offering certain types of co-insurance and deductibles. In addition to his interest in HMO's, Mr. Burnett is using the company computer to study patterns of practice and hospital costs in the Des

Moines area. His corporation hopes to design new health insurance plans with innovative incentives for cost savings.

Too often health planners, and even doctors, think some sort of punitive action must be taken to enforce perceived notions of good practice, when what is needed is for concerned parties to reach a consensus so that change can be implemented by education and proper incentives. The cost containment problem will be solved just as we have solved nearly every problem we have faced. Remember the doctor shortage? As the Legislative Chairman of this Society for many years, I was politically weened on that particular issue.

ALTHOUGH we welcome input concerning the delivery of health care from all sorts of diverse groups, including government, labor, business, consumers, health planners and hospital administrators, we must assume ultimate responsibility for the health of our patients as well as the community of patients we all treat. In other words, the captain of the ship must be trained in the ways of the sea rather than administration or management.

The ship we sail has a top crew. They are

YEAR'S EMPHASIS — CARING FOR AND ABOUT OUR PATIENTS

(Continued from page 227)

patients. In return, we must accept the responsibility to preserve and enhance the overall quality and sufficiency of care.

Secondly, it is my intention to remind physicians that although the Iowa Medical Society can serve as their advocate in the halls of the Iowa General Assembly, the U. S. Congress, and in various other governmental and non-governmental arenas, it cannot establish a warm and meaningful relationship between doctor and patient. In recent years we have witnessed whirlwind advances in medical technology. Perhaps this new technology has been both a blessing and a curse. On one hand, it can improve medical insight, skill and effectiveness. On the other hand however, it can depersonalize our relationship with the patient we are trying to help. Individually and collectively, we should emphasize the human values

of our profession, and reaffirm our pride in professionalism which stresses integrity and social concern. We should use our magnificent technology as the servant of our art. We should reaffirm our commitment to continuing medical education and medical research for ourselves and our successors. We must find ways to allay what appears to be a common complaint against physicians, namely, that "although we are interested in the patient's disease, we are indifferent to the patient." It behooves us to remember an old adage, that "physicians exist to cure sometimes, to relieve often, to comfort always."

FINALLY, I would like to comment on another aspect of professionalism. Time does not allow a long discussion on humanism and professionalism. However, I would like to comment, in the limited context of my own interest and involvement, on the Society's Assistance Program for Troubled Physicians. As physicians and members of a learned profession, we have an ethical responsibility to report the misconduct of a colleague. We cannot protect a

"Our profession is the only one that still speaks of its duties in this world of today in which almost everyone else speaks of its rights."

well paid, well trained and the vessel is always ship-shape and Bristol clean. There are other vessels on the high seas being sailed by people with limited training. These other ships may have defective keels and ribs and a super structure that looks good, excepting that the steel plate is thin and there are no electronics aboard. When the seas get rough or the fog becomes thick, they often transfer their patients to our ship for the remaining passage. These ships are dangerous; however, somehow the law allows them to sail. We are frustrated, our hands are tied. If we protest too vigorously, we are charged with unfair restraint of trade. What can we do? What should we do? Our lobbyists try to represent our interests, but they cannot always succeed.

In the final analysis, we must rely on the quality of our crew and the construction of our ship. Above all, we must treat our passengers with kindness, courtesy and honesty. We may

wayward or impaired physician without violating our sworn duty to protect the patient. Furthermore, we have an obligation to help preserve the professional competency and reputation of any colleague who may suffer from problems which could ultimately impair the ability of the physician to practice medicine. For this reason, the Iowa Medical Society Assistance Program for Troubled Physicians was created two years ago. The program is not designed to be a whitewash. The goal is to

"It behooves us to remember an old adage, that 'physicians exist to cure sometimes, to relieve often, to comfort always.'"

provide the opportunity for a troubled colleague to seek appropriate help and treatment before professional competency is questioned and impairment occurs. If you ever feel the need to call on the assistance program, on behalf of a colleague or yourself, do not hesitate to do so. It may be one of the most important calls you have ever made.

not cure all of them, but we can give each of them some hope.

To accomplish these nautical objectives in our profession depends on the continuing excellence of our medical education. This is our most important single asset. The knowledge that flows to us from our medical schools and associated post-graduate institutions makes it possible for us to excel. The tools that we use tomorrow are being developed today in our schools. When our medical schools are cut, ultimately we bleed.

OURS IS THE most fascinating and dynamic profession there is. It employs the most sophisticated of space-age technology, along with the unique opportunity to serve mankind. We are investigators, clinicians and teachers bound by our rich history and embarked on a noble mission.

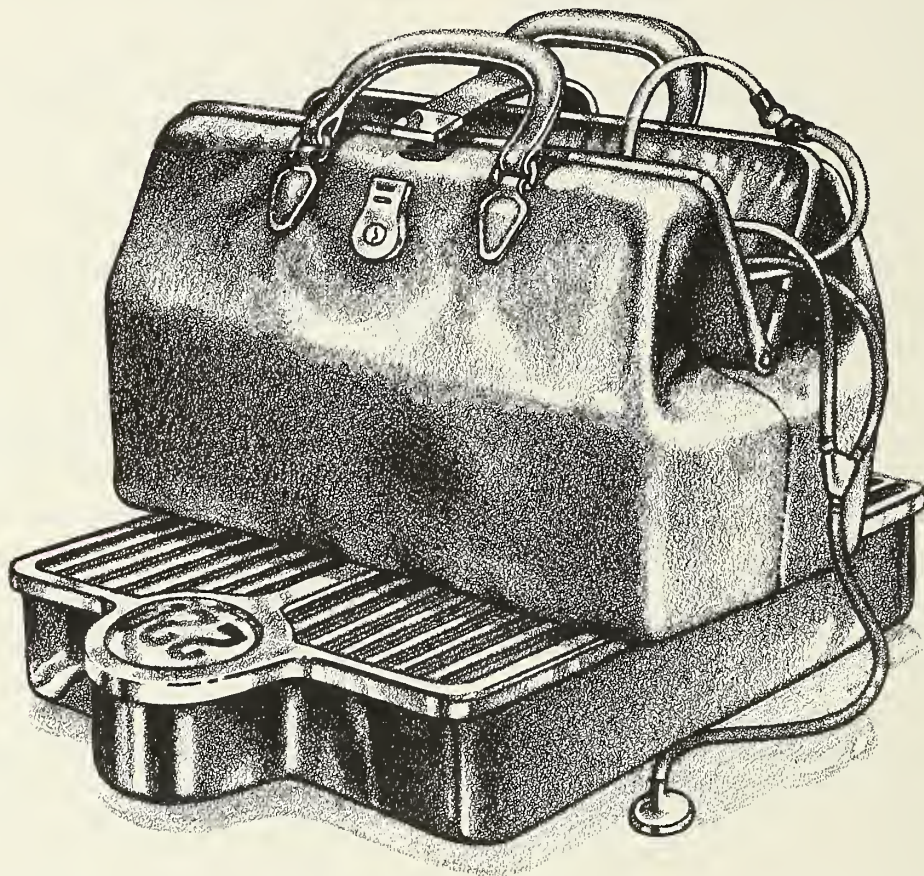
"Our Profession is the only one that still speaks of its duties in this world of today in which almost everyone else speaks of its rights."

Looking to the future, let me conclude with a quote from Louis Pasteur, "The future belongs to those who do most for suffering humanity."

These comments mark the end of the 1982 IMS annual meeting. I would like to come before you a year from now and report that all of the problems we have been discussing the past two days have been resolved; but I am a psychiatrist, I know better. I do pledge, however, that in the coming months we shall give diligent attention to the issues that confront us. We shall do so in a manner to show the public that physicians not only provide care for their patients, but indeed do care about their patients. We shall provide leadership in helping to assure that sufficient and appropriate medical services are available to all who need them. We shall continue our involvement in the voluntary effort to contain and explain health care costs without sacrificing the quality of care.

FINALLY, we shall attempt to nurture the precious bond between patient and physician, which is the nucleus of the relationship between all of medicine and all of society. For all of these we shall need the help and support of each of you.

You're helping us keep health care costs on a low-fat diet.



Last year, with your help, Blue Cross and Blue Shield of Iowa helped trim the cost of health care for our subscribers.

Programs like Utilization Review, which monitors inpatient admissions for medical necessity; outpatient surgeries; and expansion of coverage for outpatient testing have provided a good start toward controlling costs.

Physician support is critical to the success of these cost containment

measures. By encouraging the increased use of outpatient surgery when medically appropriate and by ordering outpatient testing, you have demonstrated your interest in joining the battle against rising health care costs in Iowa.

We all need to continue to cut the fat out of health care costs.

A united effort can **keep** those costs on a low fat diet.



Blue Cross
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Klippel-Trenaunay Syndrome: A Typical Case

DAVID L. BEACHY,
JAMES M. CATERINE, M.D.
and JOHN A. SCHMIDT, M.D.
Des Moines, Iowa

THE ASSOCIATED FINDINGS of a) varicose veins, b) soft tissue and bony hypertrophy, and c) port-wine hemangiomas were first described by Klippel and Trenaunay in 1900.¹⁴ Several years later, Parkes and Weber independently described several similar cases, but included arteriovenous fistula.^{15, 16} Since then, combinations of these 4 names have been used interchangeably to describe the mentioned triad (with or without arteriovenous fistula) leading to confusion. Some authors recommend reserving the term "Klippel-Trenaunay" for Klippel and Trenaunay's originally de-

This case report of a 13-year old male describes an uncommon condition and reviews the literature. The authors emphasize that recognition of KTS in patients presenting with varicosities, hemangiomas, or soft tissue and bony hypertrophy is paramount.

scribed triad, and referring to the triad plus arteriovenous fistula (previously called Klippel-Trenaunay with arteriovenous fistula, Klippel-Trenaunay-Parkes-Weber Syndrome, congenital phlebarteriectasis, or hemangiectatic hypertrophy) as Parkes-Weber Syndrome.^{2, 6} The above classification will be used in reference to the triad, with or without arteriovenous fistula.¹

Until 1965, approximately 5 cases of Klippel-Trenaunay Syndrome were identified in English language literature, although 17 unidentified reported cases probably represented this syndrome, and many cases were identified in European literature. Since then, this syndrome has been more frequently seen in English literature.² A case of Klippel-Trenaunay Syndrome (KTS) is described, followed by discussion.

(Please turn to page 232)

David L. Beachy was a medical student on rotation at Mercy Hospital Medical Center in Des Moines when this article was prepared. Dr. Catherine is a general surgeon in private practice and is a member of the teaching staff at Mercy Hospital Medical Center in Des Moines, Iowa. Dr. Schmidt is a senior surgical resident at the Veterans Administration Hospital in Des Moines, Iowa.

THE IOWA MEDICAL FOUNDATION HAS DESIGNATED THIS ARTICLE AS THE HENRY ALBERT
SCIENTIFIC PRESENTATION FOR THE MONTH OF JUNE 1982

A healthy appearing 13-year old white male presented with complaints of exertional non-radiating discomfort in his right inguinal area. He denied any protruding masses or prolonged discomfort. History revealed patchy discoloration and multiple varicosities on his right leg since childhood, and more recently, a disproportionate increase in length and breadth of the right leg. He was the product of an apparently normal pregnancy and delivery. The family history was negative for similar problems.

Examination revealed a bright 13-year old boy with a prominent suprapubic varicosity coursing across his lower abdomen, multiple varicosities in his right lower extremity, and a patchy, pink nevus flammeus extending from his right flank nearly to his knee, and covering approximately one-third of his thigh skin area.

"Management of the suspected KTS patient requires evaluation of the deep venous system with phlebography, especially if surgery is contemplated."

The right heel to knee distance was 2 cm greater than the left, and the right thigh circumference was 1.5 cm greater than the left. The patient's height was in the 40th percentile for his age, he was not overweight, and he was sexually mature. Other physical findings were normal. There was no evidence of thrill, murmur, pulsating veins, or heart failure suggestive of arteriovenous fistula. Although no masses resembling viscera were palpated in the right inguinal canal, hydrocele or local varicosities were not totally ruled out.

Arteriograms and venograms of the lower extremities revealed complete obstruction of the deep femoral venous system on the right, with increased venous collaterals. The greater saphenous system was noted to be draining through a lower anterior abdominal vein to the contralateral common femoral vein.

Klippel-Trenaunay Syndrome was diagnosed. An uneventful right hydrocelectomy with preservation of the local vasculature was performed at another institution.

DISCUSSION

The diagnosis of Klippel-Trenaunay Syn-

drome (nevus vasculosus osteohypertrophicus) is imperative to prevent the potentially devastating results of inappropriate surgery in the KTS patient. This syndrome consists of a) varicose veins, b) soft tissue and bony hypertrophy, and c) hemangiomas, generally of the nevus flammeus type. These findings are generally unilateral and involve a lower extremity, but occasionally are bilateral and may have upper extremity involvement. The port-wine stain is the most common and often the earliest presenting sign, and is occasionally patchy and frequently extends to the buttocks and trunk. The varicosities have no predilection for saphenous distribution. The hypertrophy generally involves enlargement in the length and breadth of the extremity, and may well result from the venous stasis, hyperemia and increased vascularity due to the hemangiomas. Arteriovenous fistula is usually not found, but either agenesis or obstruction of the deep venous system is usually present.⁴ In all cases, some degree of deep venous system abnormality has been noted.⁶

After operating on multiple KTS patients, Servelle, at Hospital Saint-Michel, Paris, France wrote in 1976 that "the underlying factor responsible for this disease may be agenesis, atresia or external compression of the deep veins by abnormal muscles, fibrous or fibrovascular bands."¹² In 1965, Lindenauer reported on Servelle cases and found that surgical release of the obstruction resulted in a decrease in varicosities, hypertrophy and edema in nearly all cases. Lindenauer, however, pointed out that post surgical venograms were undertaken in 11 patients from Servelle's series. In all cases, agenesis of the deep venous channels persisted, although no obstructing lesions could be identified.²

Associated anomalies are common, and include cutaneous lymphangiomas, varicose pulmonary veins, diffuse infiltrative cavernous hemangiomas of the colon, hematuria and rectal bleeding and vertebral and epidural hemangioma with paraplegia.^{6, 9, 12} Other reported anomalies include macrosydactyly and polydactyly, bilateral nephroblastomatosis, Wilms' tumor, massive osteolysis and chronic disseminated intravascular coagulation, facial asymmetry and dental malocclusions, other dental abnormalities and temporal lobe astrocytoma.^{3, 7, 8, 10, 13} Pulmonary embolism has not been shown to be a problem. No sex

preponderance or familial pattern has been noted in the literature.

Management of the suspected KTS patient requires evaluation of the deep venous system with phlebography, especially if surgery is contemplated.¹¹ In the KTS patient, this reveals dilated superficial calf veins and incompetent perforating veins. Conventional radiography of both lower extremities is recommended. Arteriography can aid in ruling out Parkes-Weber Syndrome, which has a worse prognosis than KTS, due to the possible arterial insufficiency to the limb and secondary heart disease resulting from arteriovenous fistula. Treatment has been most unsatisfactory. Stripping varicosities usually leads to worse problems with edema, leg discomfort, and even greater varicosities.⁵ Elastic compression bandages have been recommended and Jobst one-legged leotards knitted to maintain a

pressure of 40 mm Hg over the extremity was reported to have prevented recurrent edema and ulcerations in one patient.^{1, 11} Surgery should be undertaken only to close significant arteriovenous fistulas, to relieve deep venous obstruction, or correct leg length inequalities.

SUMMARY

A case of KTS in a 13-year-old male is presented and the literature is reviewed. Recognition of Klippel-Trenaunay Syndrome in patients presenting with varicosities, heman- giomas, or soft tissue and bony hypertrophy is paramount. Inappropriate venous ligation and stripping could drastically worsen the clinical situation for those patients with this syndrome.

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The references contained in this article are available either from the authors or the JOURNAL OF THE IOWA MEDICAL SOCIETY.



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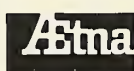
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Drug Diversion Activity In Iowa

ALEXANDER ERVANIAN, M.D.

Des Moines, Iowa

FOR SOMETIME the Iowa State Board of Medical Examiners has been receiving information about various groups engaged in diverting legitimate drugs into illegitimate channels. These organized groups seek prescriptions from physicians with the intent of selling the drugs on the streets.

One example of such a group is represented by two individuals now under arrest in Wisconsin. The allegations in this instance suggest the drug Dilaudid® was obtained with relative ease. Apparently, one of the individuals has had a laminectomy; his pattern has been to present himself (and his scar) to a physician claiming to be from out of town and in great pain.

When arrested, these individuals had an Iowa map with 38 towns marked as if they were sites where attempts were to be made to obtain drugs. Investigation by the BME showed the two did obtain drugs in several of the marked locations.

This type of drug diversion scheme has come to the attention of the Board a half dozen times this past year. The reports indicate different groups are involved. The drugs most often obtained are Dilaudid®, Percodan®, Valium®, Quaalude® and amphetamines.

One reason a drug is designated a controlled

The movement of prescribed medications into illegitimate channels is discussed briefly by the chairman of the Board of Medical Examiners. Iowa physicians are asked to be on guard when a patient appears to be pursuing this possibility.

substance is its potential for diversion and abuse. Controlled drugs acquire "street value" and are susceptible to criminal activity.

Several common themes appear in the approaches used by these groups. They include the following:

1) *Almost always the patient has a pre-diagnosed condition from a doctor in another location.*

2) *A surgical scar, amputation or some physical finding usually will be noted to support the diagnosis.*

3) *The so-called patient will normally tell the physician the drug he wants and what drugs will not work.*

4) *In most cases a false name and address are used.*

5) *Repeat visits are common if success is achieved in obtaining the drugs.*

The following suggestions may be useful to physicians:

1) *Become suspicious when a patient you have never seen before tells you what drugs he wants.*

2) *When the patient relates his diagnosis from another physician call the other physician. The cost and time involved may be insignificant when weighed against the possible problem.*

3) *Confirm patient identity. If a false name is used, the person seldom has identification to match the false name.*

Creatinine Clearance and Perinatal Outcome in Pregnancies Complicated by Chronic Hypertension

FRANK J. ZLATNIK, M.D.

LEON F. BURMEISTER, Ph.D., and

DENNIS R. BEACH, M.D.

Iowa City, Iowa

IN A STUDY of 20 pregnant women with chronic hypertension, Arias reported those women who were delivered of small for gestational age (SGA) infants or stillborn infants had lower weight-adjusted blood volumes and endogenous creatinine clearances than did those hypertensive women delivered of living, appropriate for gestational age (AGA) infants.¹ To evaluate these interesting observations in our patient population, we reviewed medical records of women with chronic hypertension who had had 24 hour creatinine clearances performed during pregnancy. Our aim was to ascertain if a low creatinine clearance in a pregnant woman with chronic hypertension was predictive of increased risk of fetal death in utero, of intrauterine growth retardation, or of poor condition of the neonate at birth.

Drs. Zlatnik and Burmeister are associated with the Departments of Obstetrics and Gynecology and of Preventive Medicine and Environmental Health at the University of Iowa College of Medicine. Dr. Beach is now affiliated with the Department of Obstetrics and Gynecology, University of Utah College of Medicine, Salt Lake City, Utah.

Obstetric records for 68 patients with chronic hypertension who had had creatinine clearance determinations performed during pregnancy are summarized. No significant association was found between low creatinine clearances and the development of superimposed preeclampsia, neonatal death, or the delivery of small for gestational age neonates. However, a statistically significant association was discovered between low maternal creatinine clearances and the delivery of neonates with one minute Apgar scores ≤ 4 . This relationship also held for that subset of the study population with mild hypertension without superimposed preeclampsia.

MATERIALS AND METHODS

The records of obstetric patients who were delivered at University Hospitals from 1968-1977 and who had a discharge diagnosis of chronic hypertension were reviewed. If the diagnosis of chronic hypertension was confirmed (hypertension antedating the pregnancy and/or blood pressure $\geq 140/90$ in the first half of pregnancy) and if the patient had creatinine clearance(s) performed during the pregnancy, she was eligible for the study. Patients with a history of chronic renal disease or with a serum creatinine level greater than 1.2 mg per deciliter were excluded. Sixty-eight patients met these criteria and form the study population.

Data of interest abstracted from the medical records were: the maximum and mean arterial blood pressures during pregnancy, perinatal outcome (intrauterine death, neonatal death, Apgar scores, birthweight and appropriateness for gestational age based on the Iowa fetal growth curve),⁶ the presence or absence of superimposed preeclampsia, and the 24 hour creatinine clearance value(s). If more than one creatinine clearance was performed during pregnancy, the arithmetic mean value was used. If a 24 hour urine specimen contained less than 800 mg. of creatinine, the collection was considered to be incomplete and that creatinine clearance was disregarded. Certain patients with superimposed preeclampsia had their creatinine clearance determinations performed only after they had developed preeclampsia. During this period the clinical laboratory determined creatinine levels in serum and urine by the Jaffe reaction using an automated analyzer.

Patients were characterized by their mean creatinine clearance values and the prevalence of the various outcome variables. The statistical significance of differences between groups was evaluated with the χ^2 and Fisher's exact tests.⁴ Simple correlation co-efficients and multiple regression analyses relating the mean creatinine clearance values and other predictor variables to the outcome variables were also performed.

RESULTS

There were 12 perinatal deaths in the 68 pregnancies (18%). Twelve women developed superimposed preeclampsia (18%) and 19 neonates were SGA (28%). The increased risk of perinatal death in patients with chronic hypertension who develop superimposed preeclampsia or whose fetuses are growth-retarded was confirmed in this series. The perinatal mortality in patients with superimposed preeclampsia was 42% (5 of 12) as compared with 13% (7 of 56) in patients without superimposed preeclampsia. The perinatal mortality in cases of intrauterine growth retardation was 32% (6 of 19); non-SGA offspring had a perinatal mortality of 12% (6 of 49).

All neonatal deaths (4) were associated with intrauterine growth retardation and/or superimposed preeclampsia. One half of the fetal deaths (4 of 8), however, were not associated with either intrauterine growth retardation or

TABLE I
MEAN MATERNAL 24 HOUR CREATININE CLEARANCE AS RELATED
TO SUPERIMPOSITION OF PREECLAMPSIA AND TO PERINATAL
OUTCOME (N = 68)

	Mean Creatinine Clearance (ml/minute)			Statistical Significance
	<90	90-120	>120	
N	11	33	24	
Superimposed preeclampsia	3(37)*	5(15)	4(17)	$\chi^2 = 0.86$ N.S.†
Intrauterine death	3(27)	4(12)	1(4)	$\chi^2 = 3.89$ N.S.
Neonatal death	1(9)	1(3)	2(8)	$\chi^2 = 0.95$ N.S.
Neonate SGA‡	3(27)	10(28)	6(25)	$\chi^2 = 0.20$ N.S.
1' Apgar ≤ 4	7(64)	9(27)	3(13)	$\chi^2 = 9.81$ $p < .01$

* (Figures in parentheses are percentages)

† N.S. = not significant

‡ SGA = small for gestational age

superimposed preeclampsia indicating that fetal death is a substantial risk in the woman with chronic hypertension even if the fetus is of appropriate size and preeclampsia does not develop.

Table I presents perinatal outcome data and the presence of superimposed preeclampsia as related to mean maternal creatinine clearances. The creatinine clearance values were not related to the development of superimposed preeclampsia, to neonatal death, or to the delivery of SGA neonates. Low creatinine clearances were associated with an increased likelihood of intrauterine fetal death (not statistically significant, $p < .15$) and of low one minute Apgar scores ($p < .01$).

To determine whether this apparent relationship between low creatinine clearance and poor perinatal outcome was independent of the presence of superimposed preeclampsia or of severe hypertension, those patients with mild hypertension (mean diastolic BP < 100 mm Hg) without superimposed preeclampsia were analyzed separately (Table II). Low one minute Apgar scores occurred with a statistically significantly ($p < .02$) greater frequency in those patients with clearances less than 90 ml/minute.

(Please turn to page 238)

TABLE II
MEAN MATERNAL 24 HOUR CREATININE CLEARANCE AS RELATED
TO PERINATAL OUTCOME IN MILD HYPERTENSIVES (N = 43)

	Mean Creatinine Clearance (ml/minute)		Statistical significance
	<90	≥90	
N	6	37	
Intrauterine death	1(17)*	2(15)	Fisher's p = .954 N.S.†
SGA neonate‡	0(0)	9(24)	Fisher's p = .221 N.S.
1' Apgar ≤ 4	4(67)	5(14)	Fisher's p = .012 (p < .02)

* (Figures in parentheses are percentages)

† N.S. = not significant

‡ SGA = Small for gestational age

DISCUSSION

In a retrospective study of this type the apparent association between two variables (e.g., low creatinine clearances and one minute Apgar scores) may or may not be genuine. If other important variables are not randomly distributed in relation to the independent variable being studied (creatinine clearance in this case), then the observed association between two variables may reflect the influence of the other variables which have not been considered, rather than reflecting direct association of the two which are studied. For example, even though most of these patients did not receive antihypertensive or diuretic therapy after they had been referred to University Hospitals, many had received these drugs prior to referral. Creatinine clearances obtained and outcomes observed may be related in part to this recent drug therapy. Furthermore, the one minute Apgar score certainly reflects acute intrapartum events as well as the status of the fetus at the start of labor.

The complexity of these associations is accentuated by stepwise multiple regression analyses. In the present study population there were modest, but statistically significant simple correlations ($p < .01$) between the mean creatinine clearance and both birthweight ($r = .3283$) and the one minute Apgar score ($r = .3534$). Stepwise multiple regression analyses containing other variables (for birthweight: weeks gestation, maternal weight gain per week, and prepregnant maternal weight — all

positively correlated; for one minute Apgar scores: weeks gestation — positively correlated and systolic blood pressure — negatively correlated), however, did not reveal the creatinine clearance to add significantly after the selection of other more influential independent variables to the predicted outcome. In addition to its positive correlation with birthweight and the one minute Apgar score, the creatinine clearance was also significantly related in a positive fashion in maternal weight at delivery, and to the five minute Apgar score, but not to the length of gestation or the systolic or diastolic blood pressure.

Suggesting that the relationship between low creatinine clearance and low one minute Apgar scores may be real is the finding that the association held in those patients with mild chronic hypertension without superimposed preeclampsia (Table II). Others have suggested a relationship between low creatinine clearances and adverse neonatal outcomes in hypertensive pregnancies.^{2, 3}

In contrast to Arias' findings,¹ our data do not demonstrate an association between SGA infants and low maternal creatinine clearances. Since blood volume determinations were not performed in our patients, we cannot comment on the relationship between weight-adjusted blood volume and birthweight. The relationship between blood volume and creatinine clearance must be a complicated one, however, since in normal pregnancy the marked physiologic increase in creatinine clearance occurs much earlier in gestation than does the bulk of the blood volume expansion.⁵

Patients with known chronic renal disease or with serum creatinine concentrations greater than 1.2 mg/dl were excluded from this study. Our patients with low clearances may have had unrecognized primary renal disease or may have had nephrosclerotic changes secondary to chronic hypertension. Another possibility is that their low clearances reflected diminished renal blood flow in the absence of intrinsic renal pathology.

If the apparent relationship between low creatinine clearances in pregnant patients with chronic hypertension and poor fetal/immediate neonatal condition is confirmed in other study populations, we will have a readily available, useful clinical tool. To be sure, as Arias and Zamosa² have pointed out, the test is not particularly sensitive or specific. Our data are

confirmatory in that the majority of intrauterine deaths (5 of 8) and depressed neonates (12 of 19) occurred in patients with mean clearances ≥ 90 ml/min. Nevertheless, that minority of patients with low clearances (< 90 ml/min) sustained disproportionate adverse perinatal outcome. After all, most laboratory test results in obstetrics are not absolutes and do not constitute clinical decisions, but simply tilt the thinking of the physician one way or the other with a particular patient. Creatinine clearance determinations may well be useful in this regard.

A second potential use for creatinine clearance determinations is in the evaluation of antihypertensive drug treatment in pregnant patients with chronic hypertension. Perhaps valuable information could be gained in this controversial area by assessing the effects of various antihypertensive agents on the creatinine clearance in those patients with low values prior to treatment. The creatinine clear-

ance in part reflects renal blood flow. If one speculates that it also reflects uterine blood flow, then an increase in the creatinine clearance with drug treatment may indicate improved uterine blood flow and a better intrauterine environment for the fetus. Conversely, a fall in the creatinine clearance with treatment may indicate that the therapy being employed is not serving the interests of the fetus.

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Consult the package literature for prescribing information.
Indications and Usage: Cefclor* (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae* (*Diplococcus pneumoniae*), *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci).

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Cefclor.

Contraindication: Cefclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Cefclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

Cefclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Cefclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy: Although no teratogenic or antileptility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Usage in Infancy: Safety of this product for use in infants less than one month of age has not been established.

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Cefclor.

Hypersensitivity reactions have been reported in about 1.5

Some ampicillin-resistant strains of *Haemophilus influenzae*—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Cefclor.^{1,5}

In clinical trials, patients with bacterial bronchitis due to susceptible strains of *Streptococcus pneumoniae*, *H. influenzae*, *S. pyogenes* (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Cefclor.⁷

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percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthritis and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Cefclor* (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). (1002191)

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.

Note: Cefclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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COMMENTING EDITORIALLY

MARION E. ALBERTS, M.D.
SCIENTIFIC EDITOR

SUCCESSFUL SPRING MEETING

THE ANNUAL Spring meeting of the Iowa Medical Society House of Delegates has adjourned. The business has been considered and policy decisions have been made by the delegates. The election of new officers offers us a renewed stimulus to work under their leadership for the good of our Society. Underlying this renewal is the need for dedication by all Society members to continue to provide the

RECOGNITION FOR ACTIVE PHYSICIAN

NUMEROUS IOWA PHYSICIANS are active in civic affairs or hold public office. These community service activities often are unknown to other members of our Society. Physicians have many unique opportunities by virtue of their intelligence, education and stature to become involved. Frequently, members of our profession use the "too busy" response when asked to serve; yet, if they analyzed the working hours of many other business and professional persons, they would learn that others are busy also.

A person should be known by his works. Recently, Dr. John H. Kelley, immediate past president of the IMS, was discussing this matter. He noted that other state medical societies recognize the civic endeavors of the profession

best possible medical service to the people of our state.

The JOURNAL congratulates our new and continuing officers, as well as all who have accepted appointments to the IMS committees. We need to commend the efforts of dedicated persons who serve the important and varied needs of this professional organization.

The motto of Rotary International, "He profits most who serves best," is similarly applicable to the IMS. It was gratifying to see the zeal and goodwill among the delegates at the May House meeting. They served their constituent members well. Our gratitude is extended to them. Their efforts do not go unnoticed, for they function to provide the impetus for the entire organization.

In addition, we must not overlook the long and tedious hours expended by our loyal IMS staff. How fortunate we are to have these dedicated people to do the many mundane tasks that are necessary during such a meeting beyond their everyday duties.

A new year commences. As the leaves and flowers of the plants and trees blossom forth, the new year of our Society emerges. There are ongoing programs, and innovations for the future. Best wishes to the officers and committee-persons. We stand ready to do our part along with you. — M.E.A.

in various ways. In some instances this is in the form of a recognition award to the "Physician of the Year" who has shown his worth to his community as a citizen, not as an experienced and skilled physician.

I propose that our Society do the same. The nominations could come from component county societies to an IMS committee responsible for selecting the "Physician-Citizen of the Year." The physician who serves on his school board, in some area of government, in the affairs of his church or a civic organization or other enterprise should be recognized by his physician peers. The presentation of an appropriate scroll or plaque could be made at the IMS annual meeting along with other traditional awards.

The practice of medicine is not the only duty we have to our fellow citizens. The physician who demonstrates such civic responsibilities should be recognized. What do you think? — M.E.A.

NUCLEAR MAGNETIC RESONANCE

NUCLEAR MAGNETIC RESONANCE (NMR) is not a new modality; it has been useful to organic chemists for nearly three decades. However, it appears NMR will usher into our profession an exciting new era of medical diagnosis, perhaps ultimately to succeed the CAT scanner. (There goes another quarter to a half million dollars!)

NMR works by focusing on the nuclei in the atoms of a single element in biological tissue, and detecting whether those nuclei behave normally in response to external magnetic forces. The nuclei tend to spin and occasionally wobble. It is this wobbling that is detected and relayed to a computer for analysis. Images that are then reconstructed resemble a cross-section of the organ in question. That reconstruction then represents a kind of biochemical

blueprint of cellular activity. Instead of showing physical alterations within the body, NMR demonstrates the chemical imbalances that precede structural change.

It has been suggested that NMR imaging eventually may allow pinpointing of excessive fat deposits on major blood vessels, measure blood flow rates from well-identified anatomic lesions in the brain or elsewhere, or detect small cancers that have broken away from the primary site. Ultimately, when whole-body superconducting magnetic equipment becomes available, it may be possible to assess metabolism, function, and the success of treatment of heart disease and stroke. Another area under investigation is the determination of how donor kidneys from cadavers may function after transplanting.

It is presumed that NMR is safe because of the low energy level utilized. All aspects are under consideration at various centers. All in all, it is an exciting innovation. The January 8, 1982 issue of JAMA* presents a review of the present state of this modality. We await more research, and of course, approval by the F.D.A. — M.E.A.

* Gunby, Phil: The new wave in medicine: nuclear magnetic resonance. JAMA, 247:151-159, 1982.

SOME NEW BOOKS

SOMETHING HIDDEN: A BIOGRAPHY OF WILDER PENFIELD, 1982, by Jefferson Lewis. Doubleday & Co. Inc., New York. Price, \$13.95. A delightful review of the life of one of the "greats" in medicine.

EMERGENCY GUIDE TO PEDIATRIC CARDIAC ARREST by Suzanne Vokes, R.N., and Paul Hartunian, EMT-Paramedic. TRI-MED, 65 Christopher Street, Montclair, New Jersey 07042. Price, \$5.95. A very good, concise outline. Recommended for any Emergency Room.

CURRENT MEDICAL DIAGNOSIS AND TREATMENT '82, editors, Marcus A. Krupp and Milton Chatton, Jr. Lange Medical Publications, Los Altos, California 94022. Price, \$23.00.

WHITMER'S GUIDE TO TOTAL WELLNESS, 1982. Doubleday & Co. Inc., New York. Price, \$14.95. A program to help achieve maximum longevity and high quality of life by eliminating such bad habits as smoking, lack of exercise, poor nutrition, obesity, excessive alcohol and stress.

FACELIFTS: EVERYTHING YOU ALWAYS WANTED TO KNOW, 1982, by Norma Lee Browning. Doubleday & Co. Inc., New York. Price, \$14.95.

LIFELONG SEXUAL VIGOR: HOW TO AVOID AND OVERCOME IMPOTENCE, 1981, by Marvin B. Brooks. Doubleday & Co. Inc., New York. Price, \$12.95.

IOWA PHYSICIANS WHAT ARE THINKING RIGHT NOW!

THE SENTIMENTS OF THE IOWA MEDICAL PROFESSION ON 20 STATEMENTS COVERING IMPORTANT ASPECTS OF HEALTH CARE DELIVERY ARE REPORTED ON THE FOLLOWING PAGES. SHOWN BY PERCENTAGE ARE RESPONSES TO AN IOWA MEDICAL SOCIETY SURVEY RETURNED BY APPROXIMATELY 900 PHYSICIANS (A 30% RESPONSE). THE SURVEY WAS CONDUCTED BETWEEN MARCH 17 AND APRIL 10, 1982.

WHAT IOWA PHYSICIANS ARE THINKING IN 1982!

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO OPINION
	%	%	%	%	%
1. My patients are expressing concern over the cost of hospital and medical care on a steadily increasing basis.	21	50	21	2	6
2. Fees paid directly by patients have slowed noticeably with the economic recession.	11	50	24	2	13
3. Discussion locally among individuals, groups, and in the media is more concerned with high health care costs than any time in my recollection.	25	52	18	1	4
4. In our area we are seeing definite community interest in alternate delivery mechanisms (HMO, IPA, etc.).	12	28	39	12	9
5. Local business/industry is increasing its activity as regards employee health care costs, utilization of inpatient services, and consideration/implementation of alternate delivery systems.	21	42	22	4	11
6. Physicians in our area understand the HMO/ IPA (and other alternate delivery concepts) quite well.	8	35	39	9	9
7. Hospital admissions and lengths of stay are getting closer scrutiny by physicians than at any time in my practice here.	26	59	10	1	4
8. Hospital admission criteria followed by physicians in this area are about as tight as they can be and still preserve the quality of care.	17	50	24	4	5
9. Hospital admissions and lengths of stay have been reduced in my area to the lowest possible points, trying to balance quality care assurance and cost considerations.	15	48	28	4	5
10. Iowa physicians understand that the peer and utilization review functions at my hospital(s) are done under auspices of the doctor-led Iowa Foundation for Medical Care and these functions are generally accepted by our physicians.	7	61	19	7	6

WHAT IOWA PHYSICIANS ARE THINKING IN 1982!

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO OPINION
	%	%	%	%	%
11. There should be more encouragement and financial incentive for out-patient care.	34	55	7	1	3
12. A high-cost (premium) first-dollar full benefit coverage (as opposed to a lower cost, co-pay/ deductible alternative) is preferred by lowans in this area.	5	29	27	6	33
13. Blue Cross/Blue Shield is the preferred pre-payment (insurance) option among lowans in our area.	5	52	19	5	19
14. In today's economic conditions direct payment to providers by Blue Shield is apt to help it retain and increase its number of "participating physicians."	10	49	18	6	17
15. There is good acceptance of policies, procedures, and payments issued by Blue Shield among physicians in this area.	3	32	36	17	12
16. Blue Cross/Blue Shield is the logical Iowa instrument to pursue a statewide alternate delivery system.	4	32	26	18	20
17. A statewide HMO/IPA developed and marketed by Blue Cross/Blue Shield will probably receive support and participation from many physicians in this area.	1	16	39	25	19
18. It is feasible for a statewide HMO/IPA to succeed in a rural oriented state such as Iowa.	1	17	33	22	27
19. There is a definite upsurge in competition for patients among physicians in my area of Iowa.	12	46	30	5	7
20. The medical profession is providing strong local and state leadership in dealing with matters of quality care, utilization, costs, manpower, etc.	7	54	24	6	9

CURRENT IOWA PHYSICIAN APPREHENSION LEVELS

Iowa physicians were asked recently to indicate their levels of apprehension over the factors noted below. Specifically, they were requested to rank these areas as they contribute to "your" apprehension over being able to maintain a satisfying, quality-oriented medical practice. The tabulation of the survey produced the following composite ranking.

- 1 INCREASING HEALTH CARE COSTS**
- 2 ONSET OF ALTERNATE DELIVERY SYSTEMS**
- 3 CHANGING HEALTH PLANNING MECHANISMS**
- 4 EXPANDING PHYSICIAN MANPOWER**
- 5 UTILIZATION OF ALLIED MANPOWER**
- 6 QUALITY ASSURANCE ACTIVITY**





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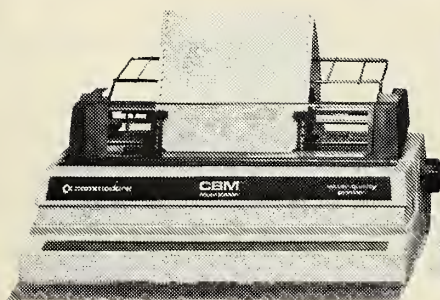
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OUR MAN ON EDUCATION

RICHARD M. CAPLAN, M.D.

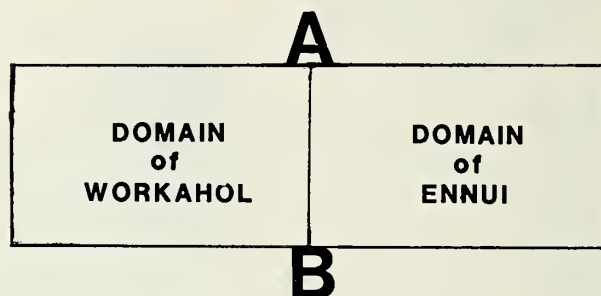
CONTINUING NON-MEDICAL EDUCATION

SOME OF MY RECENT READING has exposed me to more pessimism than I am accustomed to. The first item was a delightful and fanciful tale by Voltaire, entitled "Zadik." The plot seemed almost like a soap opera, with its sequence of very bad things happening to a hero described as exemplary in all particulars. The theme asked the ancient question, "Why Do Bad Things Happen to Good People?" The ultimate happy ending seemed contrived and unbelievable, just like the similar happy ending of the Book of Job.

The other reading sampled the German philosopher Schopenhauer, who lived and wrote shortly after Voltaire, in what was called then and since "the age of enlightenment." How sad that such enlightenment can bring such extreme pessimism. In an earlier era Thomas Hobbes characterized life as "nasty, brutish and short." Schopenhauer echoed some of that view of life and described its pressures, anxieties and pains. He viewed humanity as pursuing a course designed to protect and defend itself against the viciousness of existence. He further saw how some individuals manage to quit this feverish effort, changing their style and not running and struggling all of the time, only to find themselves promptly immersed in what he called the "horrible domain of ennui." He believed man cannot tolerate that condition either. Well, I think some people can, but indeed "workaholics" cannot. It probably would

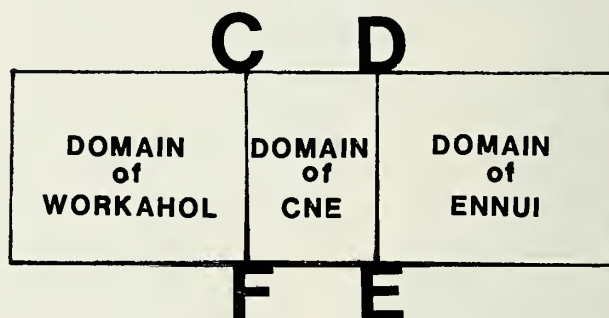
not excite much opposition if I characterized most physicians as workaholics. There are indications however, that many of the "new breed" of physicians are trying eagerly to structure a life style that is more temperate and less workaholic.

Figure 1



The line AB in Figure 1 that separates the workaholic existence from the similarly destructive and unpleasant ennui may seem to have an almost Euclidean thinness. If we strive for the golden mean of moderation, that thin line becomes a very difficult place to try to remain and maintain balance. (It is a little like flipping a coin and having it land on its edge.)

Figure 2



How could we widen that line AB to become a region CDEF in Figure 2? Some "widening" activities that people use include Zen, meditation, religious fervor, alcohol and other drugs, counseling, psychoanalysis, etc.

I recommend instead: CNE (Continuing Non-Medical Education).

Some of its examples might include a project among any of these: collecting; computer literacy; READING, especially (because of their brevity) short stories, one-act plays, essays, poems; handicrafts; music; jogging or walking;

Dr. Caplan is Associate Dean for Continuing Medical Education at The University of Iowa College of Medicine.

picnicking (with your beeper left at home); photography; boating; medical history, etc.

As he often did, Sir William Osler summed it up splendidly with these words:

"Every day do some reading, or work apart from your profession. I fully realize . . . how absorbing is the profession of medicine . . . but you will be a better man and not a worse practitioner for an avocation. I care not what it may be: gardening or farming, literature or history or bibliography, any one of which will bring you into contact with books."

DRUG DIVERSION ACTIVITY IN IOWA

(Continued from page 235)

4) Carefully evaluate the need for writing a prescription for a controlled drug.

5) If you suspect drugs are being obtained for other than legitimate reasons, report it to the Board and to your local law enforcement agency.

The Board of Medical Examiners has had cases recently where a physician has used or allowed use of a rubber stamp signature on prescriptions. This practice lends itself to drug diversion. The law requires a controlled drug prescription be signed in the same manner as a check or other legal document.

A related problem is the matter of pre-signed prescription blanks. The Board has discovered instances where this practice has created problems through inappropriate use by physician's assistants and other personnel.

A further area of concern is prescribing by physicians for themselves and their families. Some impaired physicians have prescribed for themselves and families and have created problems. The best advice is, if you or your family need a prescription for scheduled drugs have it written by another doctor.

Iowa physicians are held in esteem by their peers. More importantly, they are held in high esteem by their patients and the general population. Maintenance of this esteem will occur by giving attention to such matters as the diversion of legitimate drugs to illegitimate channels. The Board of Medical Examiners believes by alerting physicians to this problem it can be recognized and dealt with so that each prescription issued will be for legitimate medical purposes.

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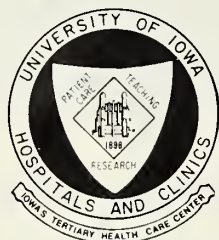
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DRUG THERAPY REVIEW



UNIVERSITY OF IOWA HOSPITALS AND CLINICS

REYNOLD SPECTOR, M.D., Editor

THE NEW CEPHALOSPORINS

THE FIRST TWO of a number of third-generation cephalosporins have recently been licensed for clinical use. These compounds (Table 1), which include cefotaxime, moxalactam, ceftizoxime, and cefoperazone, can be generally characterized as being very resistant to β -lactamases and having an increased spectrum of activity and potency against gram negative organisms. Of note is the presence of at least moderate activity against strains of *Pseudomonas aeruginosa*. The third-generation cephalosporins are, however, less active than penicillin G and semisynthetic penicillins against gram positive organisms (such as, staphylococci and streptococci) and are inactive against enterococci.

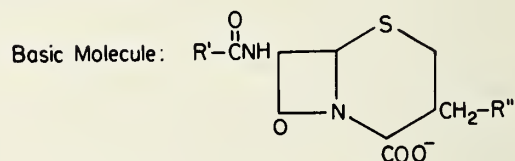
STRUCTURE, PHARMACOKINETICS, AND ANTIMICROBIAL ACTIVITIES

A comparison of the structures of the third-generation compounds reveals similarities with both their cephalosporin and penicillin precursors (Figure 1). While the four-membered β -lactam ring remains the core of antimicrobial activity, the nature of the R' side chain determines the spectrum of action. The

R'' side chain is important to the pharmacokinetic characteristics of these drugs. (It should be noted that, technically, moxalactam is an oxalactam, in which the sulfur atom present in the basic ring structure is replaced by oxygen, and that both moxalactam and cefoxitin have a methoxy group attached to the β -lactam ring, adding greater resistance against β -lactamases.)

Most of the penicillins and cephalosporins are excreted, in an active form, into the urine. These compounds are also excreted by the biliary system. Among the third-generation drugs, moxalactam is handled almost exclusively by the kidney. Conversely, cefoperazone is excreted primarily into the bile. Cefotaxime is the only third-generation cephalosporin which is metabolized to inactive com-

The Cephalosporins



R'	R''	Name
	$-\text{O}-\text{C}(=\text{O})\text{CH}_3$	cephalothin (Keflin)
	$-\text{O}-\text{C}(=\text{O})\text{CH}_3$	cephapirin (Cefadyl)
	$-\text{S}-\text{CH}_2-\text{N}(\text{CH}_3)-\text{N}(\text{CH}_3)-\text{CH}_2-$	cefazolin (Ancef, Kefzol)
	$-\text{S}-\text{CH}_2-\text{N}(\text{CH}_3)-\text{N}(\text{CH}_3)-\text{CH}_2-$	cefamandole (Mandol)
	$-\text{O}-\text{C}(=\text{O})\text{NH}_2$	cefaxitin (Mefoxin)
	$-\text{O}-\text{C}(=\text{O})\text{CH}_3$	cefotaxime (Clafaran)
	$-\text{H}$	ceftizoxime (Cefazox)
	$-\text{S}-\text{CH}_2-\text{N}(\text{CH}_3)-\text{N}(\text{CH}_3)-\text{CH}_2-$	moxalactam (Maxam)
	$-\text{S}-\text{CH}_2-\text{N}(\text{CH}_3)-\text{N}(\text{CH}_3)-\text{CH}_2-$	cefoperazone (Cefabid)

Figure 1

This information for Iowa physicians is furnished and sponsored by the University of Iowa Hospitals and Clinics.

pounds (Table 2). An important attribute of the third-generation compounds is their ability to cross the inflamed blood-brain barrier. This attribute should become useful clinically in the management of patients with meningitis secondary to gram negative bacilli.

CLINICAL CONSIDERATIONS

The third-generation cephalosporins have elicited considerable interest because they represent a class of antibiotics with broad spectrum activity and minimal toxicity. However, the first several analogs, cefotaxime, ceftizoxime, and moxalactam have limited activity against *Pseudomonas aeruginosa*. Therapeutic failures of pseudomonas infections are being increasingly documented, and have been associated with the development of resistance to these antibiotics. Failures in the management of patients with serratia and staphylococcal infections have also been documented. In some reports, significant superinfections with enterococci have occurred. In vitro, the third-generation cephalosporins appear to have synergistic action with aminoglycosides against many strains of *Pseudomonas aeruginosa* and *S. marcescens*, and such combinations may

TABLE 1
THE CEPHALOSPORINS

First Generation	Secand Generation	Third Generation
cephalaridine	cefamondole	cefataxime
cephalathin	cefoxitin	maxalactam
cephapirin	cefuraxime	ceftizaxime
cefazalin	ceforanide	cefoperozone
cephradine	cefaclor	cefsulodin
cephalexin	cefadraxil	ceftriaxane
		ceftazidime

be useful in the management of difficult infections secondary to these organisms. In general, however, it is expected the new cephalosporins will be used as single agents in the treatment of infections secondary to susceptible organisms. Enthusiasm for their potential to replace the usual empiric combination therapy in the management of agranulocytic patients or patients with mixed infections must be tempered with the realization of their limited activities against *Pseudomonas* sp., *S. aureus*, and a few other organisms. They may also partially

(Please turn to page 248)

TABLE 2
COMPARATIVE FEATURES OF THE CEPHALOSPORINS

	First Generation		Second Generation		Third Generation			
	Cephalothin or Cephapirin	Cefozolin	Cefamandale	Cefoxitin	Cefataxime	Ceftizaxime	Maxalactam	Cefaperazane
Pharmacokinetics								
Half-life	30-45 min.	2 hrs.	1 hr.	40 min.	1 hr.	1 hr.	2 hrs.	2 hrs.
Metabolized	Yes	Na	Na	Na	Yes	No	No	No
CSF penetration	No	Na	No	Poor	Yes	Yes	Yes	Yes
Excretion	urine, bile	urine, bile	urine, bile	urine, bile	urine, bile	urine, bile	urine (90%)	bile, urine
Antimicrobial Spectrum*								
Grom positive								
S. aureus	+++ +	+++	++++	+++	+++	+++	++	++
S. pneumoniae	+++	+++	++++	+++	+++	+++	++	++
S. pyogenes	+++	+++	++++	+++	+++	+++	++	++
S. fecalis	—	—	—	—	—	—	—	—
Grom negative								
E. coli	+++	+++	++++	++++	++++	++++	++++	++++
Klebsiello	++	+++	++++	++++	++++	++++	++++	++++
Enterabacter	—	—	++	—	+++	+++	+++	+++
Serratia	—	—	—	+	++	++	++	++
Prateus (indale +)	—	—	++	++	++++	++++	++++	++++
H influenzae	—	+	++	++	++++	++++	++++	++++
N. ganarrhea	+++	+++	++++	+++	++++	++++	++++	++++
Acinetobacter	—	—	—	—	+	+	—	+
P. aeruginasa	—	—	—	—	+	+	+	+++
Bacteroides fragilis	—	—	—	+++	++	++	+++	++

* In vitro activity, expressed relatively between + ond + + + + ; — denates na activity.

replace the need for aminoglycoside therapy in the management of patients with infections secondary to most coliforms. Their own potential for nephrotoxicity needs to be further assessed.

The third-generation cephalosporins should probably not be used for the therapy of any infection when a narrower spectrum, less expensive agent is available. For example, in patients with peritonitis secondary to *E. coli*, ampicillin remains the agent of choice. Indeed, it would seem useful for hospitals to adopt a policy in which only one or two cephalosporins from each generation is available for use. The third-generation product should probably be reserved for use only when there is documented infection due to an organism that is resistant to both the first- and second-generation compounds. The use of even a second-generation compound should probably also depend on microbiological documentation and demonstrated resistance to a first-generation product.

A major concern is the cost of the new agents. At prices of \$9 or more per gram (about \$1,000 for a 10-day treatment course), they are two to three times more expensive than the second-generation compounds and four to five times as much as the first-generation cephalosporins. When ceftriaxone becomes available, these costs may be considerably reduced because of this compound's very long half-life (8 hrs.). Despite these higher per gram costs, administration of a third-generation drug alone may be less expensive than the combination of clindamycin and gentamicin, with attendant frequent monitoring of blood levels and renal function, that is used in the empiric treatment of suspected or mixed infection in the abdomen. It should be noted, however, that neither treatment regimen is less expensive than cefoxitin, and, without proof of the unlikely involvement of an organism resistant to cefoxitin, there seems to be little reason to use these other approaches.

As regards the choice of a third-generation cephalosporin, it would seem that only minor differences exist between most of the compounds. Cefotaxime has a shorter half-life than moxalactam and is metabolically inactivated. Ceftizoxime has very similar antimicrobial properties and pharmacokinetics as cefotaxime, except that it is not susceptible to metabolic inactivation. Cefoperazone has greater in vitro

activity against *Pseudomonas aeruginosa*, but its clinical efficacy still needs further documentation.

One important point worthy of further emphasis is the comparison of the third-generation cephalosporins with existing penicillins. The spectrum of carbenicillin and ticarcillin is in many ways similar to these cephalosporins, and there would be little reason to use the more expensive cephalosporins for the treatment of patients, not allergic to penicillin, with infections due to organisms susceptible to both types of antibiotics.

This entire situation is further complicated by the fact that two new (third-generation) penicillins have just been introduced, with several additional related compounds on the way. Mezlocillin (Mezlin) and piperacillin (Pipracil) extend the spectrum of carbenicillin to include some strains of *Klebsiella* sp., and have improved activities against *Pseudomonas* sp. These new penicillins are much less expensive (about \$3 per gram), and it may be more economical to turn to these new compounds for the management of certain patients.

Finally, we would like to emphasize that the use of any of the newer broad spectrum compounds not be a substitute for the logical approach to identification of an etiologic agent (including gram stains) and appropriate treatment thereof with narrow spectrum agents. Most infections are still caused by single agents, and treatment with these expensive broad spectrum compounds can only serve to enhance the selection of multiple antibiotic-resistant organisms and raise the cost of patient care. — Luis Alberto Villar, M.D., Fellow in Internal Medicine, and Sam T. Donta, M.D., Professor of Medicine.

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STATE DEPARTMENT/ PUBLIC HEALTH

IOWA HYPERTENSION STANDARDS

MAY was once again *National High Blood Pressure Month*. For the eighth year in a row, thousands of health professionals across the country acted as a single community with a common goal — to draw special attention to the importance of high blood pressure control. Historically, *National High Blood Pressure Month* has helped to generate new activities in areas where none existed; expand activities when the time was right for growth; and revitalize hypertension control activities that needed renewed energy.

An estimated 14 million of the 60 million people with high blood pressure currently receive regular therapy to *control their blood pressure*. Compliance with prescribed treatment programs varies but some studies suggest it is as low as 20% in male population age 25-62, and even lower among black males. Therapy is complicated by the fact that hypertension presents few, if any, symptoms and is appropriately known as the silent killer.

It is well known that reducing blood pressure decreases overall mortality and cardiovascular morbidity in patients with moderate and severe hypertension. Statistics from Health and Human Services show that individuals in the workforce with high blood pressure develop approximately:

- three times as much coronary heart disease;
- six times as much congestive heart failure;
- seven times as many strokes,

as do individuals with *controlled* or normal blood pressure. Obesity increases these risks when combined with elevated cholesterol levels and diabetes. Uncontrolled high blood pressure, when associated with elevated cholesterol levels, smoking and diabetes have a significant impact on all our lives, directly and indirectly, at home and at work — an impact that cannot be denied or ignored.

In the past, mass screening has played a key role in the control process, because hypertensive patients are generally unaware of their disease. Today, rather than mass screening, more comprehensive community control programs are emphasized. Most adults already know their blood pressure level or will have it measured during routine contact with the health care system. Health care professionals in all specialties have been and continue to be strongly encouraged to measure blood pressure at each patient visit. Whether an initial measurement takes place at a public site, a community clinic, the worksetting, or the office of a physician, the following arbitrary stratification established by the National High Blood Pressure Coordinating Committee for diastolic blood pressure level has been conventional:

Closs	Blood Pressure, mm Hg
Stratum I (mild)	90-104
Stratum II (moderate)	105-114
Stratum III (severe)	115

The term "Mild" (Stratum I) is included because of common usage. It should be emphasized that even for those with so-called mild hypertension, the cardiovascular risk is twice that for individuals with normal blood pressure. Moreover, in the presence of target organ damage or other independent risk factors, the overall risk is further increased.

The findings of the 1980 Hypertension Detection and Follow-up Program suggest that *long-term reduction of blood pressure decreases overall mortality at all levels of hypertension*. This is a special importance with regard to mild hypertension because of its high prevalence in the population. Although reduction in overall

This information on public health matters is furnished and sponsored by the Iowa State Department of Health.

mortality has not yet been demonstrated in patients below age 50 with mild hypertension, treatment of these patients reduces the incidence of such hypertensive complications as stroke, congestive heart failure, left ventricular hypertrophy, and progressive rise of blood pressure. It is therefore reasonable to reduce blood pressure even in uncomplicated mild hypertension by pharmacologic or nonpharmacologic therapy.

In those with moderate and severe hypertension, even partial blood pressure reduction has been shown to decrease cardiovascular morbidity. Data from the Hypertension Detection and Follow-up Program demonstrate that setting a therapeutic goal for each patient is important. The initial goal of antihypertensive therapy is to achieve and maintain diastolic pressures at less than 90 mm Hg. A reasonable further goal is the lowest diastolic pressure consistent with safety and tolerance.

In an attempt to encourage detection, education, referral, and control, the Iowa State Department of Health (ISDH) has developed Standards for Hypertension Programs. The State criteria for screening programs is consistent with those defined by national organizations. Initial screening and rescreening for adults (age 18 and over) to determine above normals and appropriate referral are indicated in Table I.

The Iowa State Department of Health encourages only those public programs which provide follow-up of screenees with elevated readings. All program sponsors are requested

TABLE I
STANDARDS FOR HYPERTENSION PROGRAMS

NORMAL	
Diastolic under 90	
Isolated systolic 150 or lower in screenees under age 35.	
Isolated systolic 160 or lower in screenees age 35 or older.	
ABOVE NORMAL	
Diastolic 90 to 95	
Refer to rescreening program. If diastolic remains 90 or above at rescreening, refer to physician for prompt evaluation.	
Diastolic 95 & above	
Refer to physician for prompt (within one month) evaluation.	
Diastolic 115 and above	
Refer to physician for immediate evaluation.	
Isolated systolic above 150 in screenees under age 35	
Refer to physician for prompt evaluation.	
Isolated systolic above 160 in screenees 35 or older	
Refer to physician for prompt evaluation.	

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to present their plans for screening to the city or county board of health having jurisdiction over the geographical area where the screening program is to be conducted. The approval should be contingent upon the condition that follow-up and education will be conducted under the auspices of the public health nursing agencies.

The focus of the Iowa Program will continue to encourage detection programs in an effort to screen adults. Worksite screening programs for detection and education as a single effort or as part of an overall health promotion program is suggested. Detection programs for teenagers will be explored in the near future.

Statistics generated statewide from participating Iowa Hypertension Screening programs held in 1981 will be available soon. Please feel free to request information gathered in your county. If you have questions or comments concerning the hypertension efforts of the Iowa State Department of Health, please contact Barbara Thiede, R.N., Iowa State Department of Health, Lucas State Office Building, Hypertension Program, Des Moines, Iowa 50319. 515/281-6801.

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April 1982 Morbidity Report

Disease	Apr. 1982 Total	1982 to Date	1981 to Date	Most Apr. Cases Reported From These Counties
Amebiosis	9	36	2	Boone, Johnson
Brucellosis	0	1	0	
Chickenpox	1386	4526	5290	Linn, Polk, Pottawottomie
Campylobacter	14	64		Johnson, Polk
Cytomegalovirus	5	14	8	Johnson, Wopello
Eaton's Agent infection	14	77	10	Johnson, Boone, Buena Visto
Encephalitis, virol	0	6	4	
Erythema infectiosum	73	163	605	Wopello, Polk, Modison
Gastroenteritis (GIV)	1577	6864	10528	Linn, Polk, Pottawottomie
Giardiasis	4	31	11	Scott, Polk, Jones
Hepatitis, A	14	37	120	Decatur, Johnson, Polk
Hepatitis, B	14	35	27	Linn, Polk, Scott
Hepatitis type unspecified	1	7	23	Clinton
Non A, Non B	2	6		Von Buren, Wopello
Herpes Simplex	38	116	64	Johnson, Polk, Scott
Herpes Zoster	5	9	3	Polk, Block Hawk, Linn
Histoplasmosis	3	11	5	Polk
Infectious mononucleosis	20	100	157	Linn, Block Hawk, Scott
Influenza, lab confirmed	29	38	188	Polk, Wopello, Linn
Influenza-like illness (URI)	5407	22404	43843	Linn, Johnson, Polk
Meningitis aseptic	4	10	19	Johnson, Cerro Gordo, Des Moines
bacterial meningococcal	24	64	48	Block Hawk, Polk, Scott
	1	5	12	Polk
Mumps	6	21	34	Polk, Block Hawk
Pertussis	1	1	2	Pottawottomie
Robies in animals	48	142	295	Dubuque, Soc, O'Brien
Rheumatic fever	0	2	6	
Rubello (German measles)	0	0	0	
Measles	0	0	1	
Salmonellosis	31	100	62	Polk, Story, Dubuque
Shigellosis	5	17	14	Dubuque, Muscotine, Polk
Toxic Shock Syndrome	1	6	8	Muscotine
Tuberculosis total ill	10	35	36	Block Hawk, Polk
bact. pos.	7	25	22	Block Hawk, Polk
Venereal diseases:				
Gonorrheo	443	1547	1538	Polk, Scott, Block Hawk
Syphilis	4	11	9	Polk, Scott, Allomokee

Laboratory Virus Diagnosis Without Specified Clinical Syndrome: Adenovirus — 2, Dubuque, 1, Polk; Guillain-Borre — 1, Decatur, 1, Story; Legionellosis — 1, Block Hawk, 1, Des Moines, 1, Foyette, 1, Guthrie, 2, Johnson, 1, Woodbury; Reye Syndrome — 1, Polk, 1, Union; Hookworm — 2, Scott; Ascariosis — 1, Clinton, 2, Johnson; Tetanus — 1, Des Moines; Malaria — 1, Johnson, 1, Scott.

NEWS/PRODUCTS, PROGRAMS, ETC.

Information on various products, programs, etc., is received regularly by the IMS JOURNAL. Here are short items sifted from the mail by the Scientific Editor. A reference to a specific product is not intended to suggest any particular endorsement. Additional information on any entry may be obtained by contacting the IMS JOURNAL.

3M CLIP-ON MONITOR — 3M Trace Anesthetic Gas Monitor No. 3500 is a lightweight, clip-on unit that is worn on the clothing near the user's breathing zone. The monitor measures time weighted average concentrations of halothane, enflurane and similar anesthetic gases to which operating room personnel are exposed.

EARLY WARNING SYSTEM — Hewlett Packard, Palo Alto, California, has introduced a new patient monitor for the measurement of both hemodynamic and gas parameters. The monitor (HP 78345A Patient Monitor) accurately measures both inspired and expired CO₂ and displays the CO₂ waveform. A 30-minute trend of heart rate and end tidal pCO₂ can be displayed.

ORAL CONTRACEPTIVE — G. D. Searle & Co. now markets a new low-dose oral contraceptive (Demulen 1/35[™]) which has 15 micrograms less estrogen per pill than Demulen[®]. The new product contains 1 milligram synthetic progestogen, ethynodiol diacetate, and 35 micrograms of a synthetic estrogen, ethinyl estradiol.

PACKAGED FOR 3-DAY THERAPY — Schering Corporation has introduced a new convenient 6-tablet dispensing unit for use in 2-tablet, 3-day therapy with Gyne-Lotrimin (clotrimazole) 100 mg Vaginal Tablets. Gyne-Lotrimin Vaginal Tablets 100 mg are indicated for the treatment of vulvovaginal candidiasis. Clotrimazole is a broad spectrum antifungal agent that inhibits the growth of pathogenic yeasts.

UNIQUE ANTIBIOTIC — Moxam[™] (moxalactam disodium) has been released by Eli Lilly and Company. Moxam is the first of a new class of beta-lactam antibiotics — neither a penicillin nor a cephalosporin. This antibiotic has activity against a wide range of gram-negative organisms and certain gram-positive organisms.

NEW MONITORING ELECTRODE — A monitoring electrode with "breathable" backing, excellent adhesion to skin and a low-chloride gel to minimize skin irritation has been introduced by 3M's Medical Products Division. Red Dot Monitoring Electrodes No. 2255 are smaller than most — only 6 cm — for greater choice in placement. The new soft cloth backing conforms to the body, stretching as the patient moves, without loss of adhesion. The built-in abrader pad helps to remove the dead skin layer to achieve better contact and excellent trace quality. The silver and silver chloride eyelet helps to ensure reliable tracings. The new electrodes are packed 25 to a bag, 40 bags to a case.

NEW IMMUNOSUPPRESSANT FOR RENAL TRANSPLANTATIONS — A T-lymphocyte-selective immunosuppressive drug with ability to lower rejection rates in renal transplantation procedures has been introduced by the Upjohn Company. ATGAM Sterile Solution is said to have increased the one-year survival rate for transplanted kidneys by as much as 27%. The generic for ATGAM is Lymphocyte Immune Globulin, Anti-Thymocyte Globulin (Equine).

NEW DRUG — Paxipam was marketed by Schering Laboratories in November as a prescription drug. It is a derivative of the benzodiazepene class of drugs widely used in medicine and is a Schedule IV controlled substance. The drug is indicated for the short-term treatment of symptoms of mild, moderate and severe anxiety disorders. Dosage should be individualized for maximum beneficial effect. The usual recommended dose in adults is 40 mg 3 to 4 times a day. Paxipam is supplied as a bright orange, scored, 20 mg tablet and a white, scored, 40 mg tablet; each size is packaged in bottles of 100 tablets and boxes of 100 (10 strips of 10 tablets each) for unit dose dispensing.

ABOUT IOWA PHYSICIANS

Dr. Thomas A. Vargish, assistant professor, Department of Surgery, U. of I. College of Medicine, was guest speaker at a recent workshop on "Multiple Trauma," in Calmar, sponsored by the Minowa Area Health Continuing Education Association. . . . **Dr. John Rhodes, Sr.**, Pocahontas, was guest speaker at a recent meeting of the Wright County Medical Society in Clarion. Dr. Rhodes spoke on "Political Problems in Medicine." . . . **Dr. Paul Mittelstadt** will begin family practice in Cresco in August. A native of Blue Earth, Minnesota, Dr. Mittelstadt received the M.D. degree at the University of Minnesota School of Medicine. He is currently completing his family practice

residency at St. Joseph Mercy Hospital in Mason City. . . . **Dr. Robert Singer**, director of emergency services at Schoitz Memorial Hospital in Waterloo, has been named chairman of the Northeast Iowa Emergency Medical Services Association; and **Dr. Stephen C. Paulk**, Waterloo surgeon, is medical director of the regional organization. . . . **Dr. Herbert Rosen**, Des Moines, has joined the staff of the Eidbo Medical Surgical Clinic in Des Moines. . . . **Dr. Mervin L. McClenahan**, Dubuque, recently was appointed medical director for the John Deere Dubuque Works. . . . **Dr. and Mrs. M. Neil Williams**, Cedar Falls, recently returned from a short-term mission to the Dominican Republic sponsored by the Christian Medical Society. They were part of a team of physicians, surgeons, nurses and paramedical personnel.

Dr. Scott Linge, Fayette physician for 29 years, has sold the Fayette Medical Clinic to the West Union Medical Clinic. Dr. Linge retired in March due to ill health. He and Mrs. Linge were honored recently by the Fayette community at an open house in Garbee Hall on the



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Adverse Reactions: Dizziness, drowsiness, light-headedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, e.g., excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

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ABOUT IOWA PHYSICIANS

(Continued from page 254)

Upper Iowa University campus. . . . **Dr. Patrick Welle** will open a pediatric practice in Fort Madison in August. Dr. Welle received the M.D. degree at the University of Illinois School of Medicine in Chicago and has had a pediatric residency at the University of Minnesota. . . . **Dr. Clare C. Jones**, longtime Spencer physician, has retired. Dr. Jones received the M.D. degree at Rush Medical College in Chicago. He began his medical practice in Spencer in 1933. . . . **Dr. Rodney Johnson** recently joined the medical staff of the Floyd County Hospital in Charles City. Dr. Johnson received the M.D. degree and served his orthopedic surgery residency at the University of Calgary, Calgary, Alberta, Canada. Prior to locating in Charles City, Dr. Johnson was associated with a multi-specialty medical group in Montana. . . . **Dr. Gerald J. Collins**, Dubuque, recently was named a Fellow of the American Academy of Facial Plastic and Reconstructive Surgery. . . . **Dr. Edward Hertko**, Des Moines, was guest speaker at a recent meeting of the Newton area chapter of the American Diabetes Association. Dr. Hertko discussed the new Central Iowa Diabetes Education Center in Des Moines.

Dr. William A. Castles, Dallas Center, retired in March after 36 years of providing medical care to residents of the Dallas Center area. Dr. Castles received the M.D. degree at the U. of I. College of Medicine, and interned at St. Mary's Hospital in Kansas City, Missouri. He began medical practice in Dallas Center in 1946. A former chief of staff at Iowa Lutheran Hospital in Des Moines, Dr. Castles served as director of the Iowa Academy of Family Physicians from 1957-1962 and vice president from 1963-1964. He was a delegate to the American Academy of Family Physicians from 1964-1967 and was instrumental in the formation of the College of Family Physicians. . . . **Dr. Paul Koellner**, Ames, was guest lecturer at an Iowa State University Special Education Seminar. Dr. Koellner talked on "Mental Retardation."

At a recent meeting of the Des Moines Consortium of Family Physicians, **Dr. Roy Overton**

(Please turn to page 256)

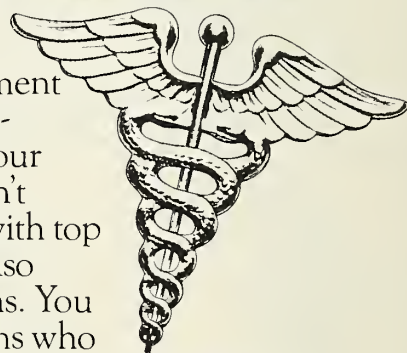
was named Family Physician of the Year; **Dr. Robert Kreamer** was named Consultant of the Year; and **Dr. Paul Holzworth** was presented a special award as Physician/Parent of the Year. All are Des Moines physicians. Also honored at the meeting was Sister Patricia Clare, R.S.M., Mercy Hospital Medical Center in Des Moines. Sister Clare was named Hospital Administrator of the Year. . . . **Dr. K. D. Dolan**, Iowa City, has been named president of the Iowa Radiology Society; and **Dr. Dale Roberson**, Cedar Rapids, president-elect. **Dr. Jeffrey H. Watters**, Des Moines, was re-elected secretary-treasurer. . . . The U. of I. College of Medicine has announced the promotion of the following physicians to the rank of full professor — **Dr. Richard L. Anderson**, ophthalmology; **Dr. Richard A. Brand**, orthopaedic surgery and materials engineering; **Dr. Neal F. Kassell**, surgery; **Dr. Stefan Loening**, urology; **Dr. David M. Lubaroff**, urology and microbiology; **Dr. Jean Robillard**, pediatrics; **Dr. Robert L. Rodnitzky**, neurology; and **Dr. Wilbur L. Smith**, radiology and pediatrics.

Dr. Lane A. Reeves, Des Moines, has com-

pleted a fellowship in reproductive endocrinology and infertility at the Johns Hopkins University Hospital in Baltimore, Maryland. Dr. Reeves will resume his gynecology practice in Waterloo in August. . . . **Dr. Don C. Green**, Des Moines, newly appointed director of the Iowa Pain Management Center at Northwest Community Hospital, recently announced the appointment of 12 co-directors. **Drs. Marvin Dubansky, Marshall Flapan, Sinesio Misol and Joshua Kimelman** will head the orthopedics service; **Drs. Ernesto Barrantes and Rafael Ortiz**, the anesthesiology section; **Dr. James Caterine**, general surgery; **Drs. Michael J. Stein, Joseph M. Doro and David Friedgood**, neurology; **Dr. Roger D. Shafer**, psychiatry, and **Dr. Kenneth Rappaport**, internal medicine and nephrology. During the 5th Annual Governor's Conference on Substance Abuse, **Dr. Stanley Haugland**, Des Moines, was presented the annual Kirk Strong Award for his contribution to the field of substance abuse. The award is presented in recognition of the personal and professional services of Dr. Kirk H. Strong (July 9, 1926 — September 8, 1978) to the field of substance abuse. Dr. Haug-

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land has served since 1975 as medical director of Powell III Alcoholism Treatment Center, Iowa Methodist Medical Center, Des Moines. Since 1970, he has served as chairman or co-chairman of the Iowa Medical Society's Subcommittee on Alcoholism and Drug Abuse. As a member of this Subcommittee, Dr. Haugland helped to establish the society's new Assistance Program for Troubled Physicians.

Dr. David Sands recently began a "house call only" pediatric practice in Fairfield. Dr. Sands received the M.D. degree at the U. of I. College of Medicine and served his pediatric residency at the University of Kansas. Dr. Sands makes house calls only unless you go to the clinic in Mt. Pleasant where he works part-time.

DEATHS

Dr. Clifford E. Lierman, 76, longtime Lake View physician, died April 9 at Loring Hospital

in Sac City. Dr. Lierman received the M.D. degree at the University of Nebraska School of Medicine. Following military service in World War II, he began medical practice in Lake View. Dr. Lierman served as chief of staff at Loring Hospital in Sac City for several years and on the Lake View-Auburn Board of Education for over 17 years. Prior to his retirement, he served as Sac County Medical Examiner and County Health Officer. In April, 1981, he was the recipient of the Lake View Commercial Club's Hall of Fame Award and recently was presented the Team Doctor Award by the Iowa High School Athletic Association.

Dr. Melvin G. Bourne, 79, Algona, died at his home April 23. Dr. Bourne received the M.D. degree at the U. of I. College of Medicine and completed his internship at Harper Hospital in Detroit, Michigan. He began medical practice in Algona in 1931, retiring in 1975. Dr. Bourne was a charter member of the American Academy of Family Physicians.



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FAMILY PRACTICE PHYSICIAN NEEDED — Three physician family practice group, board certified, needs board certified family practice physician to join a well established family practice. For further information contact R. C. Larson, M.D., Beaverdale Clinic, 2912 Beaver Avenue, Des Moines, Iowa 50310. 515/255-3106.

FAMILY PRACTITIONER NEEDED — for three physician professional corporation in south central Iowa. Excellent opportunity to practice in a rural area. Clinic adjacent to county hospital. Growing practice. Contact Paul Rowland, Manager, Corydon Medical Clinic, P.C., 100 East South Street, Corydon, Iowa 50060. 515/872-2111.

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In The Public Interest

Nuclear War — Major Concern



THE HUMANITY-THREATENING medical consequences of nuclear warfare received prominent attention from the 1982 Iowa Medical Society House of Delegates when it met in May. This crucial topic and other important issues were considered by more than 175 physician delegates in Des Moines May 1-2.

The medical legislators supported a statement declaring basic fear of and opposition to warfare, whether it be nuclear, chemical, bacteriological, or even conventional — and, in doing so, particularly recognized the catastrophic danger to all of life in the event of nuclear war.

In approving the warfare statements, the Iowa delegates okayed a resolution to be submitted to the 1982 American Medical Association House of Delegates in June asking for follow-up to previous AMA actions. Specifically, the IMS is bidding for appointment of an AMA "ad hoc" committee to investigate and report what physicians and the entire Association can and should do to help prevent nuclear war and the medical consequences of same. Expressions on the subject were requested also for transmittal to the president and to the Iowa congressional delegation.

What other subjects received attention in May? Well, acting on 24 resolutions and several reports introduced by committees, county medical societies, councilor districts, and individual delegates, the House attended to a wide range of topics. The diversity is shown by these brief references to various House actions.

- *Newborn Screening* — Reaffirmed the concept of voluntary screening programs which are medically appropriate for the detection of newborn genetic and metabolic disorders.

- *Use of Cigarettes* — Supported a Surgeon General report as to the dangers of cigarette smoking and urged physicians to so inform their patients. Also suggested the value of legislation requiring restaurants to provide non-smoking areas. Opposed as well the advertising of tobacco and alcohol products.

- *CPR Proficiency* — Recommended all able-

bodied Iowa physicians keep themselves proficient in basic cardiopulmonary resuscitation (CPR) and that county medical societies be responsible for this training. Further, it was indicated the IMS should continue to work with the State Department of Public Instruction to encourage school CPR training programs.

- *Automotive Safety* — Encouraged further research of crash protection systems in motor vehicles and backed installation of at least passive restraint seat belts in new vehicles as soon as possible. Also said there should be legislation to require effective restraints for passengers four years old and under.

- *Medical Education* — Backed efforts to promote adequate private and public financial support for deserving medical students.

- *Alternate Delivery Systems* — Said the Iowa Medical Society should actively consult with any group developing a statewide alternate delivery plan, e.g., an HMO/IPA. Such consultation is not meant to endorse or support such development and the decision to participate remains with the individual physicians.

- *Blue Shield* — Requested Blue Shield to seek, once again, a ruling from the Insurance Department on the assignment of benefits to any physician designated by the insured.

- *Health Care Costs* — Called for further physician attention to patient hospital costs. Also asked the Iowa Foundation for Medical Care continue to be a source of fee information for physicians.

- *Physician's Assistants* — Received a thorough report on PA activity in Iowa.

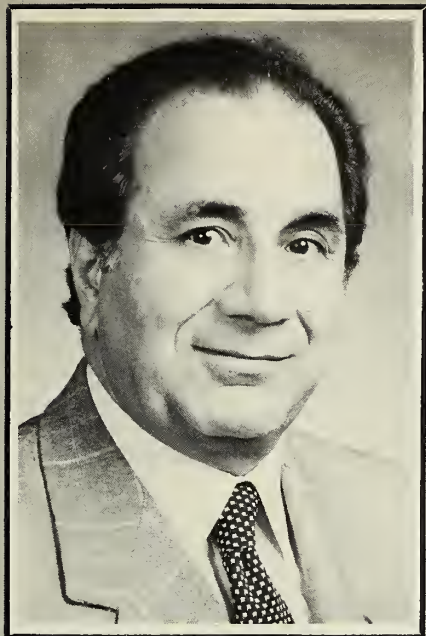
- *Emergency Services* — Supported sound local and state planning of emergency medical services, with reference to use of 3-digit emergency telephone service.

- *Drug Use* — Acknowledged need for maximum public understanding of the appropriate and inappropriate use of all chemical compounds, and asked for further consideration of certain terminology.

The preceding will attest to the 1982 House of Delegates being a busy and productive time. The physicians who represented their county societies deserve commendation.

June 1982

Journal of the Iowa Medical Society



PRESIDENT'S PRIVILEGE

THE CHANGING LANDSCAPE

SOIL EROSION is a matter of genuine concern to informed Iowans. We are seeing rich black dirt moved unpredictably by winds and waters — perilously threatening our farm economy. We wonder if we have acted too hastily in our handling of the land. Is today's stepped-up attention to soil conservation, to no-till farming, etc., a response to the overzealousness of our earlier days? Is it something we could have avoided?

There may be a parallel here for medical care delivery. We are seeing as dramatic a change in the medical care landscape as has probably occurred in Iowa history. We have seen health maintenance organizations emerge in two Iowa locations with their companion independent practice associations. We are aware that another HMO, somewhat differently organized, is on the horizon in northeast Iowa. We know, too, of additional HMO/IPA activity with statewide implications.

The winds of change blow, both predictably and unpredictably. We are seeing the survival of smaller Iowa hospitals depend on the assumption of their operational and/or administrative functions by larger, stronger counterparts. We are seeing physicians increasing in number, maybe even in great number; one vivid indication is the record number of persons (812) taking the Iowa medical licensure

examination this month, more than twice the size of any previous exam group.

These factors demonstrate clearly that more competition is in the offing; it also calls to mind the theory about the fittest surviving. Would that out of all the press for economic relief, for efficiency and convenience, that cool and deliberate minds will function to shape the change. At every opportunity we, as physicians, should stress the need for optimal quality and also the value normally resulting from continuity of care.

I am gratified by the action of the 1982 IMS House of Delegates which asks the Society to consult with any group intending to develop a statewide alternate delivery system. Such consultation, the House has said, is not meant to endorse or reject a plan being proposed; it hopefully is available to furnish a wise and objective professional review. The subsequent participation of individual physicians will be their own choice. I assure you the IMS Board of Trustees will give serious attention to this House action and will use Society expertise in a conscientious manner.

Hormoz Rassekh, M.D.
President

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THINGS YOU SHOULD KNOW

MEDICAID CUSTOMARY/PREVAILING

On July 1 Medicaid began updating customary and prevailing fee calculations to reflect charges submitted in calendar 1981. For physicians only, Medicaid prevailing charges will be determined from customary charge data on a statewide basis by specialty. Medicaid will no longer recognize geographic location when calculating the prevailing. Also, for physicians, Medicaid increases will be limited to 5% over last year's statewide prevailing.

BC/BS REORGANIZATION

A significantly revamped Blue Cross/Blue Shield administrative organization is scheduled to begin operation this month. Five new management divisions have been devised; the external affairs division will be the one to relate to providers of services.

AUGUST 11 WORKSHOP

Chiefs of hospital medical staffs, and hospital administrators and trustees have a workshop available Wednesday, August 11 at IMS headquarters. The focus will be on quality assurance, risk management and credentialing. Panels on "Doctors and Hospital: Future Trends?" and "Withdrawing or Withholding Medical Treatment: What Are the Legal Issues?" will be presented. W.R. Fifer, M.D., Minneapolis, will be the workshop consultant. Plans call for 75 registrants; a \$35 fee will be charged. Co-sponsors are the IMS and Iowa Hospital Association. More info is available from IMS headquarters.

FINANCIAL PLANNING SEMINAR

On Wednesday, July 14, interested member physicians may participate in a Financial Planning Seminar, offered by the Iowa Medical Society. Presenting the seminar will be Martin Anthonisen, chairman, Financial Strategies Group, Ltd., Calumet City, Illinois. The session will cover tax matters and investment effectiveness.

PROVIDER TELEPHONE ONLY

Medicaid claim info can be obtained from the Iowa Title XIX carrier, SDC, by calling 800/372-6045 or in Des Moines 263-3984. These numbers are for exclusive use by providers and are not meant to be given to recipients.

DON TAYLOR MEMORIAL

The large conference room at IMS headquarters is soon to be named the Taylor Conference Room. This action honoring Donald L. Taylor, long-time Society EVP who died in January, was taken by the board of trustees on the recommendation of a special past presidents' committee. An appropriate memorial plaque will be obtained.

IMS MEMBER DIRECTORY

Member opportunity to place informational messages in the 1982-83 IMS Directory was explained in a folder sent with the June UPDATE. Deadline for submitting messages for the Yellow Section is July 23. Call IMS headquarters for any info.

ECONOMICAL PRINTING FROM IMS

As a member benefit, the IMS is continuing to offer printing services to offices and clinics of interested member physicians. Forms, announcements, patient information folders, etc., are among the items printed. The Society provides 5,000 Rx forms in 50 pads of 100 each for \$50. Contact IMS for info.

SIGN OF THE TIMES

Management of the Monticello hospital is being assumed by St. Luke's Hospital in Cedar Rapids July 1. The CR facility assumed similar management of the Anamosa hospital last October and is said to be looking at further such agreements.

Summary of 1982 Actions By IMS House of Delegates

THE 1982 ANNUAL MEETING of the Iowa Medical Society House of Delegates was May 1 and 2 in Des Moines. Sessions of the House were chaired each day by Lynn D. Caraway, M.D., and William C. Rosenfeld, M.D., speaker and vice speaker, respectively. Open hearings were conducted by three reference committees on May 1. The Delegates' Banquet occurred May 1 and was chaired by President John H. Kelley, M.D.

The 1982 Iowa Medical Society Merit Award recipient was Cecil W. Seibert, M.D., Waterloo. Camp Sunnyside, a Des Moines facility of the Easter Seal Society of Iowa, received the Washington Freeman Peck Award. The John F. Sanford Award was presented to Lee Couch, director of health care relations for The Bankers Life in Des Moines.

MAY 1 SESSION

Registered for the May 1 session of the House were 163 delegates and 14 ex officio members. Minutes of the May 3, 1981 session of the House of Delegates were approved as summarized in the July 1981 issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY. Reports contained in the 1982 HANDBOOK FOR THE HOUSE OF DELEGATES were approved as published with the following exceptions: (1) the report of the Judicial Council, (2) the report of the Subcommittee on Maternal and Child Health, (3) the report of the Committee on Delivery of Health Services, and (4) the report of the Committee on Sports Medicine.

The following reports were made to the 1982 House of Delegates:

Board of Trustees, chaired by M. E. Kraushaar, M.D., chairman, and involving each board

Actions of the 1982 Iowa Medical Society House of Delegates are highlighted on the following pages. Dues were retained at their present level. Subjects covered relate to nuclear war, Surgeon General's report on smoking, passive crash protection systems, etc.

member and covering these topics: *Increasing Health Care Costs, Expanding Physician Manpower, Utilization of Allied Manpower, Changing Health Planning Mechanisms, Onset of Alternate Delivery Systems, and Quality Assurance Activity.*

Blue Shield, by E. E. Linder, M.D., chairman, Board of Directors.

Iowa Foundation for Medical Care, by Robert A. Pfaff, M.D., IFMC president.

Iowa Medical Foundation, by Maurice E. Kraushaar, M.D., president, Board of Directors.

Necrology, by Daniel M. Youngblade, M.D., chairman, Judicial Council.

Nominating Committee, by Lawrence O. Goodman, M.D., chairman.

Legislative Committee, by Clarence H. Denser, Jr., M.D., chairman.

Iowa Medical Political Action Committee (IMPAC), by Jackson D. Ver Steeg, M.D., chairman. This report was accompanied by an audiovisual presentation about IMPAC.

A check for \$16,050.74 was presented by Hormoz Rassekh, M.D., chairman, IMS Board of Trustees, to the University of Iowa College of Medicine. The grant represents contributions to the AMA/ERF which have been designated for the U. of I. John W. Eckstein, M.D., dean, U. of I. College of Medicine, accepted the check.

Daniel Cloud, M.D., Phoenix, Arizona, president of the American Medical Association addressed the House briefly. In his remarks, Dr. Cloud stressed health care costs, accessibility and quality of medical care, and increasing emphasis on preventive medicine.

A joint supplemental report of the Committee on Alternate Delivery Systems and the Committee on Medical Service, and a supplemental report of the Committee on Emergency Medical Service were contained in the delegates' packets but were not read.

In his address to the House, Society President John H. Kelley emphasized that the physician is captain of the medical care team and must discharge the responsibility associated with this capacity. Dr. Kelley's remarks were published in the June, 1982, issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY.

Twenty-four resolutions were formally introduced and referred to reference committees. Action taken on these resolutions is reported subsequently in this summary.

The following physicians were elected to Life Membership in the Iowa Medical Society.

Allamakee: Milton F. Kiesau, M.D., Postville
 Black Hawk: Cecil W. Seibert, M.D., Waterloo
 Buena Vista: Russell R. Hansen, M.D., Storm Lake
 Butler: Fred A. Rolfs, M.D., Aplington
 Calhoun: Glenn S. Rost, M.D., Lake City
 Cerro Gordo: Jay E. Houlahan, M.D., Mason City
 Clay: John J. Buchanan, M.D., Milford
 Clinton: May Danielson, M.D., Clinton, George M. Ellison, M.D., Clinton, and Ross C. King, M.D., Clinton
 Jasper: Raymond F. Frech, M.D., Newton
 Linn: Philip I. Crew, M.D., Cedar Rapids
 Monona: Leo A. Gaukel, M.D., Onawa
 Polk: Charlotte Fisk, M.D., Des Moines
 Webster: Joseph J. Weyer, M.D., Fort Dodge
 Woodbury: Philip L. Bettler, M.D., Sioux City

The following physicians were elected to Associate Membership in the Iowa Medical Society:

Benton: Dean A. Dutton, M.D., Van Horne
 Black Hawk: Maurice M. Wicklund, M.D., Cedar Falls
 Cerro Gordo: Carroll O. Adams, M.D., Mason City

Lee: Ilse Bruehsel, M.D., Keokuk
 Linn: Hal R. Hirleman, M.D., Cedar Rapids, and Sylvan M. Lehr, M.D., Cedar Rapids
 Mahaska: Richard E. H. Phelps, M.D., New Sharon
 Muscatine: Keith E. Wilcox, M.D., Muscatine
 Polk: Daniel F. Crowley, M.D., Des Moines, Robert P. Giordano, M.D., West Des Moines, Frederick S. Katzmman, M.D., Des Moines, and Donald J. Lulu, M.D., Des Moines

Pottawattamie-Mills: W. Clark Giles, M.D., Council Bluffs, Donald V. Hirst, M.D., Council Bluffs, Arthur L. Sciortino, M.D., Council Bluffs, and Alroy G. West, M.D., Council Bluffs

Scott: Roger Anderson, D.O., Sun City, Arizona, Le Roy Dierker, M.D., Bettendorf, Robert M. Kaplan, M.D., Davenport, and W. S. Phetepplace, M.D., Davenport

Wapello: Lloyd J. Gogle, M.D., Ottumwa, Kenneth E. Lister, M.D., Ottumwa, and F. Lawrence Nelson, M.D., Ottumwa

The speaker presented information on the reference committee hearings, the balloting procedures and the concluding session of the House.

MAY 2 SESSION

Registered for the May 2 session of the House were 154 delegates and 13 ex officio members. The minutes of the May 1 session of the House were read and approved.

Mrs. Geni Howard, immediate past president, Iowa Medical Society Auxiliary, commented on her year in office.

The following physicians were announced as having been elected or reelected to the positions noted:

President-elect	Erling Larson, Jr., M.D., Davenport
Vice President	Donald L. Kahle, M.D., Dubuque
Speaker of the House	Lynn D. Caraway, M.D., Amana
Vice Speaker	William C. Rosenfeld, M.D., Mason City
Trustee (3-year term)	George L. Baker, M.D., Iowa City
AMA Delegate (2-year term)	Clarence H. Denser, Jr., M.D., Des Moines
AMA Alternate Delegate (2-year term)	John M. Rhodes, Sr., M.D., Pocahontas
Liaison Delegates	Clarkson L. Kelly, Jr., M.D., Charles City
	Robert D. Whinery, M.D., Iowa City
	James F. Bishop, M.D., Davenport
	J. D. Ver Steeg, M.D., Des Moines
Councilors	Thomas C. Graham, M.D., Iowa Falls (6)
	Max E. Olsen, M.D., Minden (10)
	Daniel M. Youngblade, M.D., Sioux City (12)

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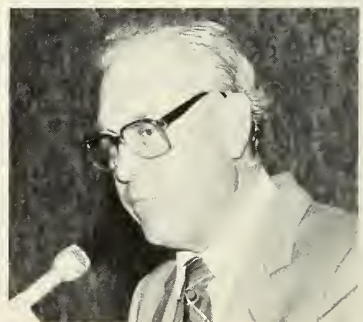
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SUMMARY OF 1982 HOUSE OF DELEGATES

Highlights and actions of the Reference Committee reports are summarized as follows:

Reference Committee on Reports of Officers and Miscellaneous Business — Anthony S. Owca, M.D., Walter L. Gerber, M.D., Eugene L. Kerns, M.D., Claude H. Koons, M.D., and James F. Stiles, M.D.

House Action: Expressed appreciation to the Board of Trustees for its thoughtful and conscientious attention to the ongoing program of the Iowa Medical Society, and for its interesting presentation of salient information at the opening session of the House.

House Action: Approved retention of IMS dues for 1983 at their current level of \$275, with notation this is the sixth year without a dues increase, and commended the Board of Trustees for its effective management of Society resources.

House Action: Retained the present six classes of IMS membership — *active, life, associate, resident physician, student and honorary*.

House Action: Endorsed retention of present stipulations for *associate* membership in the IMS as stated in the governing language.

House Action: Granted Judicial Council permission to study membership alternatives, but did not mandate any new category of membership for physicians who accept an alternative work status in their later years at a reduced compensation level.

House Action: Authorized the IMS to retain distinct qualifications for its several membership categories, acknowledging variations with the AMA.

House Action: Complimented the Committee on Delivery of Health Services for its thorough report and requested the Committee to continue to maintain its liaison with other groups (particularly as related to PA's) and to continue to report to the House of Delegates.

House Action: Affirmed IMS belief in sound local and state level planning and implementation of emergency medical services. Such planning is to include provision for but not be limited to three-digit emergency telephone service.

PICTURE HIGHLIGHTS OF 1982 HOUSE OF DELEGATES

These scenes are from the May 1-2 IMS House of Delegates held in Des Moines: (1) Cecil W. Seibert, M.D., Waterloo, left, receives 1982 IMS Merit Award from retiring board chairman, Maurice Kraushaar, M.D., Ft. Dodge. (2) Daniel T. Claud, M.D., Phoenix, Arizona, president of the American Medical Association, addresses the House of Delegates. (3) New IMS President and Mrs. Harmaz Rassekh, left, pose with retiring Society President Jahn Kelley and Mrs. Kelley. (4) Reference Committee on Reports of Officers/Miscellaneous Business, seated, from left, Walter Gerber, M.D., Iowa City, Anthony Owca, M.D., Centerville, and Eugene Kerns, M.D., Davenport. Standing, from left, Claude Kaans, M.D., West Des Moines, and James Stiles, M.D., Cedar Rapids. (5) Reference Committee on Legislation, seated, from left, Thomas Graham, M.D., Iowa Falls, Bruce Trimble, M.D., Mason City, and James Knatt, M.D., Council Bluffs. Standing, from left, Amada Chanca, Jr., M.D., Mason City, and Jahn Clancy, M.D., Iowa City. (6) Reference Committee on Insurance/Medical Service, seated from left, Gary LeValley, M.D., Ft. Dodge, Dennis Walter, M.D., Des Moines, and Harald Miller, M.D., Davenport. Standing, from left, Milton Barrent, M.D., Clinton, and Jahn McGee, M.D., Burlington. (7) 1982 IMS Jahn Sanford Award being presented to Lee Cauch, left, by Society President Jahn Kelley. (8) Ralf Karlsson, left, receiving the Washington Freeman Peck Award on behalf of the Easter Seal Society. (9) Newly-elected AMA delegate Clarence H. Denser, Jr., M.D., Des Moines, and reelected AMA delegate, Jahn M. Rhades, Sr., M.D., Pacahantas, reelected AMA alternate delegate Robert Whinery, M.D., Iowa City, and newly-elected alternate delegate, Clarksan Kelly, Jr., M.D., Charles City. (10) IMS caucillars present were, seated, from left, Warren Wulfekuhler, M.D., Mason City, Donald Radawig, M.D., Spirit Lake, Daniel Youngblade, M.D., Siaux City, Dennis Walter, M.D., Des Moines, and Kenneth Dalan, M.D., Iowa City. Standing, from left, Thomas Graham, M.D., Iowa Falls, Sidney Smith, M.D., Oskaloosa, Robert Kent, M.D., Burlington, Robert Sautter, M.D., Mt. Vernon, Enfred Linder, M.D., Ogden, Jahn Olds, M.D., Des Moines, and Max Olsen, M.D., Minden. (11) New IMS board includes, seated, from left, Erling Larsen, Jr., M.D., Davenport, president-elect, Jahn E. Tyrrell, M.D., Manchester, chairman, and Harmaz Rassekh, M.D., Council Bluffs, president. Standing, from left, George Baker, M.D., Iowa City, trustee, Jahn Kelley, M.D., Des Moines, past-president, Emmett Mathiasen, M.D., Council Bluffs, trustee and secretary/treasurer, and Donald Kahle, M.D., Dubuque, vice-president. (12) 11 of 16 new IMS Life Members were present. (13) Dean Jahn Eckstein, M.D., U. of I. College of Medicine, left, receives an AMA-ERF check from IMS board chairman Maurice Kraushaar, M.D., Ft. Dodge. (14) Iowa Foundation for Medical Care President Robert Pfaff, M.D., Dubuque, gives an IFMC update. (15) Blue Shield Board Chairman Enfred Linder, M.D., Ogden, reports to the House.

SUMMARY OF 1982 HOUSE OF DELEGATES

House Action: Asked that the preference of the Iowa Medical Society remain in favor of an annual physical examination of Iowa high school athletes.

House Action: Instructed the Committee on Sports Medicine to continue its work toward the goal of developing procedures to provide an environment for high school sports which is as safe and injury free as possible.

House Action: Acknowledged the importance of maximum public understanding of the appropriate and inappropriate use of all chemical compounds. Usage of the term "substance abuse" was referred to the Committee on Alcoholism and Drug Abuse for study and recommendation. The Committee on Alcoholism and Drug Abuse and the Committee on Legislation were asked to evaluate and make recommendations regarding terminology in the present "substance abuse" bill. (House File 2426, enacted by the 69th General Assembly in 1982).

House Action: Opposed the advertising of alcohol and tobacco products and requested promotion of appropriate legislation in this regard.

House Action: Instructed the IMS Board of Trustees to continue its efforts to provide timely and useful information to delegates and the general membership preceding each meeting of the House of Delegates.

House Action: Directed the IMS to declare, categorically, its basic fear of and opposition to warfare, whether it be nuclear, chemical, bacteriological, or even conventional.

House Action: Asked the IMS, as an organization, to recognize the catastrophic danger to all of life in the event of nuclear war.

House Action: Affirmed the following 4-point policy statement adopted by the AMA House of Delegates in December, 1981, directing the AMA to:

"1. Inform the President and Congress of the medical consequences of nuclear war so that policy decisions can be made with adequate factual information.

"2. Prepare appropriate informational materials to educate the physician population and the public on the medical consequences of nuclear war.

"3. And other health care organizations cooperate with the responsible authorities in dealing with those matters having to do with health and medical care in the event of national emergencies, including those associated with military hostility.

"4. Not become involved in political issues outside its professional expertise such as national defense and the politics of nuclear war preparedness inasmuch as it is not appropriate for the AMA to do so."

House Action: Requested the AMA establish as soon as possible an appropriate ad hoc committee, provided with adequate resources, to investigate and report thoroughly and expeditiously this entire matter of what physicians and the entire AMA can and should do to help prevent nuclear war and the medical consequence of same.

House Action: Directed the IMS to submit the preceding request in the form of a resolution to the AMA House of Delegates at its June, 1982, meeting.

House Action: Instructed the IMS to express by letter to the President of the United States and to the Iowa Senatorial and Congressional Delegation, its strong concern as to the medical consequences of nuclear, chemical and biological warfare.

Reference Committee on Insurance and Medical Service — Dennis J. Walter, M.D., Milton E. Barrent, M.D., G. L. LeValley, M.D., John E. McGee, M.D., and Harold W. Miller, M.D.

House Action: Directed the IMS President, with approval of the Board of Trustees, to designate a committee to become actively involved in consulting with any group that is developing a statewide alternate delivery plan. This neither endorses nor opposes the development of a statewide alternate delivery system and the decision to participate in any alternate delivery system rests with the individual physician.

SUMMARY OF 1982 HOUSE OF DELEGATES

House Action: Encouraged the IMS Board of Trustees to continue meeting with Blue Shield officials to further improve and strengthen the present liaison.

House Action: Asked the IMS Board of Trustees to request the Blue Shield Board of Directors to consider rescinding a recent decision regarding the supplying of Explanation of Benefits forms to non-participating physician providers.

House Action: Instructed the IMS Board of Trustees to request Blue Shield again to ask the Insurance Department for a ruling on the matter of benefits being assigned to any physician designated by a subscriber or policyholder.

House Action: Requested the Iowa Foundation for Medical Care to continue to be the organization for physicians to refer to when needing fee information.

House Action: Encouraged physicians to work within their individual hospitals and with their hospital medical staffs to review hospital patient bills either on a monthly basis or at appropriate intervals to be mindful of the costs.

Reference Committee on Legislation — R. B. Trimble, M.D., Armado G. Chanco, Jr., M.D., Thomas C. Graham, M.D., James L. Knott, M.D., and John Clane, M.D.

House Action: Reaffirmed approval of the concept of voluntary screening programs which are medically appropriate for the detection of newborn genetic and metabolic disorders.

House Action: Supported the dangers of cigarette smoking summarized in the 1979 report of the Surgeon General entitled, "The Health Consequences of Smoking."

House Action: Urged IMS member physicians to inform their patients of the dangers of cigarette smoking.

House Action: Instructed that smoking and nonsmoking areas be designated for meetings of the House of Delegates.

House Action: Directed the IMS to seek legislation requiring Iowa restaurants to provide nonsmoking areas.

House Action: Recommended all able-bodied Iowa physicians be proficient in basic cardio-pulmonary resuscitation (CPR), with each county medical society encouraged to appoint a physician to be responsible for the training of physicians in CPR.

House Action: Instructed the IMS to continue to work with the State Department of Public Instruction to encourage local school systems to establish cardio-pulmonary resuscitation (CPR) training programs.

House Action: Encouraged further research of passive crash protection systems for occupants of motor vehicles.

House Action: Supported the installation of at least passive restraint seat belts in new motor vehicles as soon as possible.

House Action: Urged passage of legislation requiring the use of effective restraint systems for all motor vehicle passengers four years of age and under.

House Action: Rejected a resolution requesting that any IMS policy statement on the controversial subject of abortion contain both a majority and minority opinion.

House Action: Asked the IMS to remind legislators and others of the public interest in the quality of medical education and the training of students who will be the physicians of the future.

House Action: Instructed the IMS to continue to seek financial resources and investigate promising programs in the private sector that might assist medical students in financial need.

House Action: Directed the IMS to urge the Iowa General Assembly to adequately fund and support the University of Iowa College of Medicine.

House Action: Authorized the IMS to examine the liaison between the Iowa Foundation for Medical Care and Iowa physicians and make appropriate recommendations for improving such liaison to the IFMC.

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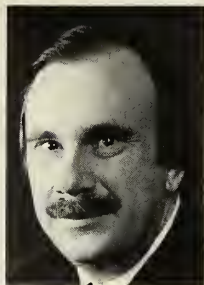
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QUESTIONS - ANSWERS

CHARLES JOHNSON
Des Moines, Iowa



NEW DIRECTION IN HEALTH PLANNING

The Health Policy Corporation of Iowa emerged in May out of the Iowa Health Systems Agency. Organizational development of the HPCI has occurred with Charles Johnson of Des Moines having become president of its board of directors. Mr. Johnson, who is vice president-finance, and treasurer of Pioneer Hi-Bred, comments here on HPCI.

The Health Policy Corporation of Iowa is now in place as a successor to the Iowa Health Systems Agency. Could you describe the purpose of the HPCI briefly?

The purpose of the Health Policy Corporation of Iowa is to foster access to quality health care at an appropriate cost by: (1) developing and implementing strategic plans of action; (2) providing data, research, informational and educational services; (3) helping to develop and influence the design of the health delivery system; and (4) bringing leaders of interest groups together for these purposes.

How, basically, will the new organization function?

The Health Policy Corporation of Iowa is designed to bring together representatives of

all the various groups that should jointly pursue initiatives directed at fostering access to quality health care at an appropriate cost. Such groups include health care providers, payers and purchasers including business, labor, insurance, government, and consumers. Costs and cost-effectiveness of health care will be an important consideration, but we also want to maintain high quality and good access.

Is it structured to encourage input from both consumer and provider perspectives?

Yes, it is. The Health Policy Corporation of Iowa has a 21-member board of directors of 11 consumers and 10 providers. There are three physicians on the Board. We certainly want to work *with* physicians and other providers of health care in Iowa.

How will the HPCI impact at the community or county level?

While the details of the local functions are still under consideration, HPCI is committed to developing support for local interest groups concerned with health care delivery and costs. We also believe that these local groups should involve consumers and providers and be broadly represented similar in nature to the Board make-up. We recognize that the delivery of health care is for the most part a local matter and one that needs attention at the local level.

What do you see as the most significant contribution to be made by HPCI in the time ahead?

The major contribution and challenge facing this group is to bring together the diverse interests in Iowa and negotiate agreements on how to effectively move ideas into action in the best interests of Iowa's citizens. There is no easy or quick solution to high health costs and other matters we will be facing together. It will take the long term commitment of time, energy and money. One of the key contributions we would like to make is to serve as the primary vehicle to implement the recommendations of the Governor's Commission on Health Care Costs.



Outpatient surgery programs do reduce inpatient hospital days and have the potential to significantly impact health care costs in Iowa.

Blue Cross and Blue Shield of Iowa support outpatient programs when medically appropriate as a means to reduce the cost of health care in our state.

And recent data show trends toward more outpatient surgery in Iowa. In fact, many of the medical and surgical procedures suggested by the Iowa Foundation for Medical Care (IFMC) as

appropriate for an outpatient setting were performed on an outpatient basis last year.

We are encouraged that more physicians and their patients are realizing the benefits of outpatient surgery.

We all need to work to maintain a qualitative, affordable health care delivery system.



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of Iowa

Practical Value Of Clinical Electromyography And Nerve Conduction Studies

MARVIN M. HURD, M.D.

Des Moines, Iowa

INCREASED USE of various diagnostic tools among the medical specialties suggests the need to explain further the value of electromyography (EMG) and nerve conduction studies to the busy practitioner. A letter on this subject was written by the author and published in the *IMS JOURNAL*¹ (October 1980). It discussed the use of myelography and EMG in the investigation of disc pathology and root pathology. From the comments received, there appeared an additional need to discuss the practical aspects of EMG. It is hoped this paper will promote optimal use by neurosurgeons, orthopedists, neurologists, family practitioners, pediatricians, internists, surgeons, and other physicians.

Some interest in electrodiagnosis of muscle and nerves occurred among early investigators, including well-known names such as Galvani (1791), Galen (1571), and Duchene (1833). However, most practical interest did not emerge until World War I with studies of

When used with clinical findings the electromyograph can help produce an accurate diagnosis. The author attempts to explain electromyography to bring about its appropriate use among the various medical specialties.

peripheral nerve injuries. Improvements in electronic equipment during World War II, as well as more war-associated peripheral nerve injuries, produced another "growth spurt" for EMG. Exploring needle electrodes were introduced in 1929 by Adrian and Bronk. Tolerance for this procedure increased significantly in 1955, with the availability of monopolar needle electrodes (a single wire electrode), rather than the co-axial needle electrodes (needle canula with wire filament within).

Practical demonstrations of nerve conduction studies were becoming apparent by the late 1940's.² Subsequent to WWII developments in electronic technology and the additional valuable impetus associated with the diagnostic evaluation of poliomyelitis, there has been continued growth in the clinical utility of EMG. Today, its value is accepted and it is a mainstay in major diagnostic centers. The Iowa Methodist Medical Center has performed 100-200 clinical studies per month for several years.

PATIENT EXPLANATION

A patient about to have an EMG will generally be given this description of what is to occur:

The author is director of electrodiagnosis at the Iowa Methodist Medical Center in Des Moines. Medical illustrations in this paper were prepared by Ruth Loomis.

THE IOWA MEDICAL FOUNDATION HAS DESIGNATED THIS ARTICLE AS THE HENRY ALBERT
SCIENTIFIC PRESENTATION FOR THE MONTH OF JULY 1982

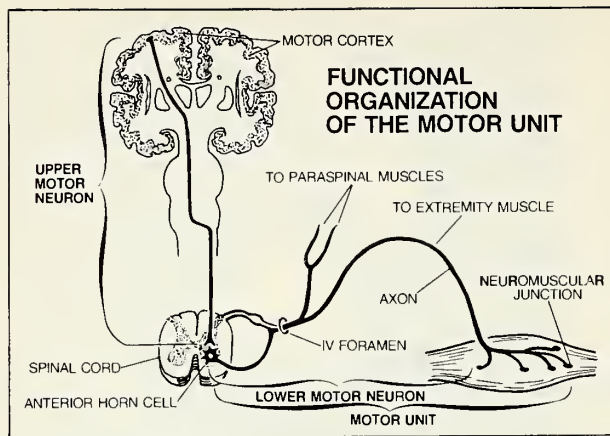


Figure 1. The physiologic unit of study in EMG is the motor unit (anterior horn cell, axon and the muscle fibers subsequently innervated). The upper motor neurons originating in the precentral motor cortex descend through the pyramidal tracts to ultimately synapse with alpha motor neurons (lower motor neurons) of the spinal cord (also termed anterior horn cell within the cord).

Your doctor has requested a test to evaluate muscle and nerve function called an EMG. This stands for electromyography. This test is similar to an EKG (electrocardiogram), except we now are not checking heart muscle electrically but a different kind of muscle called skeletal muscle found in the arms, legs, etc. To do this test we will be checking some muscles with a pin, which is irritating, but not severe (will not bring tears, etc. — generally). We will be checking the conduction responses of nerves by delivering some electrical stimulation to the nerves. This test is tolerated well and when we are finished there are no significant after effects. You will be able to return to activities of the day, including driving, that you may have been doing prior to the exam.

Additionally, we may explain we are evaluating function of the muscle, and by looking at the muscle electrically, we can assess the function of the nerves coming to the muscle.

DESCRIPTION FOR THE CLINICIAN

Electromyography and nerve conduction studies are used to evaluate diseases of the motor unit. The motor unit is the physiologic unit of the neuromuscular system which functions from the spinal cord level peripherally (Figure 1). The motor unit is one motor neuron and all the muscle fibers it supplies. The motor unit, therefore, is composed of the anterior horn cell, its axon, initially forming the anterior root which proceeds to join the dorsal root. This then yields the posterior primary ramus, supplying paraspinal muscles along the ver-

tebral column (below the medulla), and the anterior ramus to the peripheral nerves. The axon proceeding from the anterior horn cell of the spinal cord, ultimately innervates skeletal muscles at the neuromuscular junction. EMG is of value in considering the pathology of the motor unit (from the anterior horn cell to the muscle).

The anterior horn cell and its axon is called the lower motor neuron. Although not precise and well-defined, some indirect information relating upper motor neuron influences to lower motor neuron function may sometimes be inferred by studying the EMG.

EMG, therefore, is the pick-up, amplification and visual display (on an oscilloscope) and auditory production (on a loud speaker) of electrical activity associated with the electrical function of a muscle. This electrical activity is the action potential or wave of excitation which passes along the muscle fiber immediately preceding the contraction.

The summated electrical activity of all the muscle fibers of one motor unit is called a motor unit action potential. The number of muscle fibers per motor unit varies with the muscle. Large limb muscles, such as the gastrocnemius, may have one thousand muscle fibers supplied by one motor neuron, whereas extrinsic eye muscles have only a few muscle fibers per motor unit. Since the motor unit fires in an "all or none" fashion during normal contractions, there is a constant amplitude and duration for each potential (motor unit action potential or MUAP). Since these potentials are relatively small, a needle electrode placed in the muscle is needed to properly pick up and amplify the potentials.

Normal Electromyographic Function of Muscle

The examiner inserts the needle electrode and helps the patient kinesiotactically to isolate the contraction of the muscle. After being assured he is in the desired muscle, the muscle is studied at rest. This means no activation of the muscle. Normal muscle is electrically silent at rest. After this, the muscle fibers are provoked by short, brisk insertions which normally result in a quick burst of electrical activity secondary to disruption of the muscle membrane. This quickly returns to electrical silence under normal muscle conditions. Thereafter, minimal to maximal contractions are de-

veloped by the muscle. With increased strength of contraction, a single motor unit will fire more rapidly with additional motor units called on to fire (recruited) until the baseline of the oscilloscope is normally obliterated by the spikes of the many motor unit action potentials (MUAP's) recruited with maximal contraction. This is called a normal interference pattern.

Abnormal Electromyographic Findings

On examination of muscle "at rest," one may see fasciculation potentials which are the electrical counterpart of small "muscle twitchings," sometimes seen from the surface of the skin. These can be an indication of nerve degeneration as might be seen in ALS (amyotrophic lateral sclerosis), sometimes in peripheral neuropathies or peripheral nerve injuries. These represent the spontaneous firing of either a whole or part of the motor unit. These fire irregularly as opposed to the normal regular rhythm of the motor unit firing. Occasionally, fasciculations can occur in the normal individual and without other findings are not indicative of disease.

Sometimes in severe denervating conditions, fibrillation potentials can be seen at rest, but more commonly needle insertion is needed to disrupt the muscle fiber membrane resulting in after-discharges of fibrillation potentials. Fibrillation potentials are action potentials of a single muscle fiber (rather than the entire motor unit). They are not initiated by nerve impulses but occur spontaneously or in response to mechanical or chemical stimuli. An experienced electromyographer is needed to differentiate fibrillation potentials from end plate spikes which occur normally at neuromuscular junctions (which fire irregularly along with other characteristics). These normal end plate spikes (or end plate potentials), occurring at myoneural junctions, are not uncommonly misinterpreted by the electromyographer with limited experience and can lead to significant errors in evaluation.

Positive sharp waves (also called "injury potentials") are produced by insertional activity with synchronized firing of abnormally irritable muscle fibers when the exploring electrode is in contact with the injured or diseased portion of muscle fibers. These are simple, diphasic waves with an initial positive sharp component and a subsequent low amplitude,

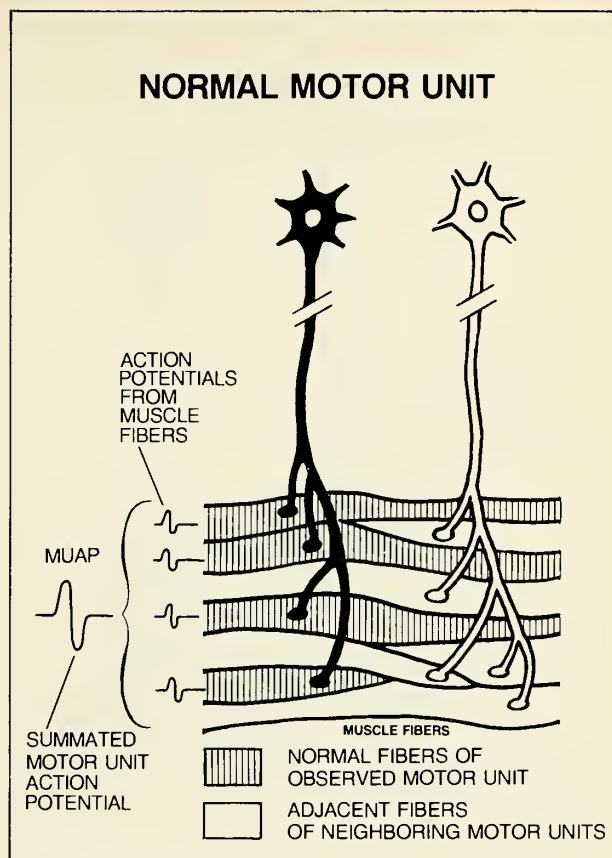


Figure 2. The normal motor unit action potential (MUAP) on the left is generated by the summation of electrical action potentials of individual muscle fibers. Two motor units are diagrammatically displayed here (showing overlap of muscle fibers from neighboring motor units) with the darkened motor neuron and its striped muscle fibers supplied creating the electrical activity displayed and summed for the MUAP. A needle electrode in the muscle is used to pick-up for subsequent amplification the electrical activity for generation of the MUAP.

long duration negative phase. These potentials are seen in many diseased states of the motor unit; for example, denervation, metabolic myopathies, some muscular dystrophies and polymyositis. Some inexperienced examiners have mistaken positive sharp waves for normal motor unit action potentials.

Fibrillation potentials and positive waves may not be seen for 18-21 days post nerve damage. For this reason, allowing 2 to 3 weeks before EMG study, after an acute nerve injury, will allow a better assessment or will better reflect the extent of injury or nerve irritation. Other electrical phenomenon, e.g., bizarre high frequency discharges, myotonic discharges, couplets, etc., will not be discussed in

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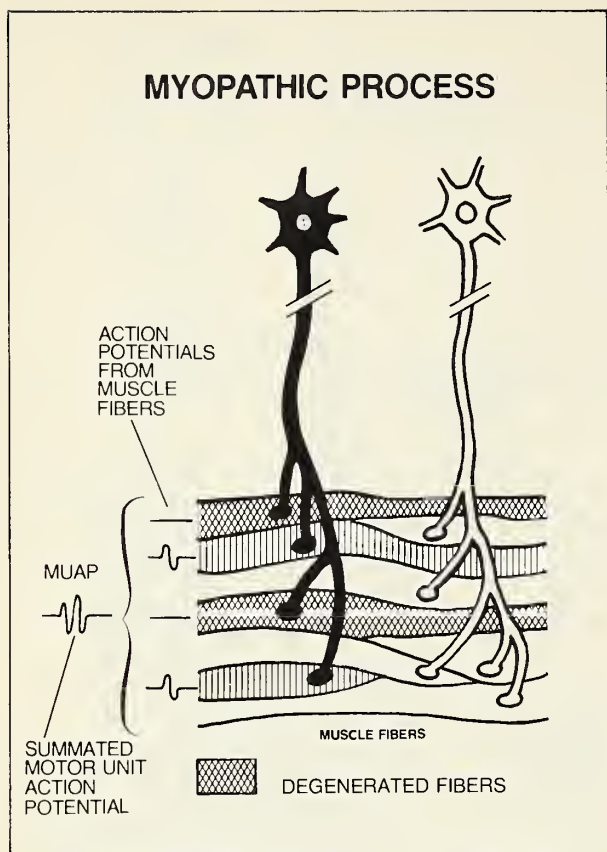


Figure 3. Diagrammatic representation of a motor unit in a myopathic process. Two of the 4 muscle fibers (of the darkened neuron) have degenerated. Although the neuron still functions, it supplies fewer functional muscle fibers. Thus, in electromyographic examination, the amplitude and duration of the summated MUAP will diminish. In this diagrammatic model, if a minimal contraction requires 4 muscle fibers, only one motor unit would be active normally. Whereas, in this myopathic process, more motor units would be required to achieve 4 functional muscle fibers. An increased number of motor units would therefore be active for the same strength of contraction.

this paper. The reader is referred to the references of this paper.

As indicated after the muscle has been evaluated at rest and with insertional activity, the muscle is then studied under various states of contraction. This allows one to study the individual motor unit action potentials (MUAP) and their integration and summation in increasing levels of contraction.

The normal motor unit action potential (MUAP) is a relatively simple summation of the individual action potentials of each muscle fiber (Figure 2). In a myopathy, with the loss of muscle fibers, the MUAP becomes smaller and more complex in summation (Figure 3). For a

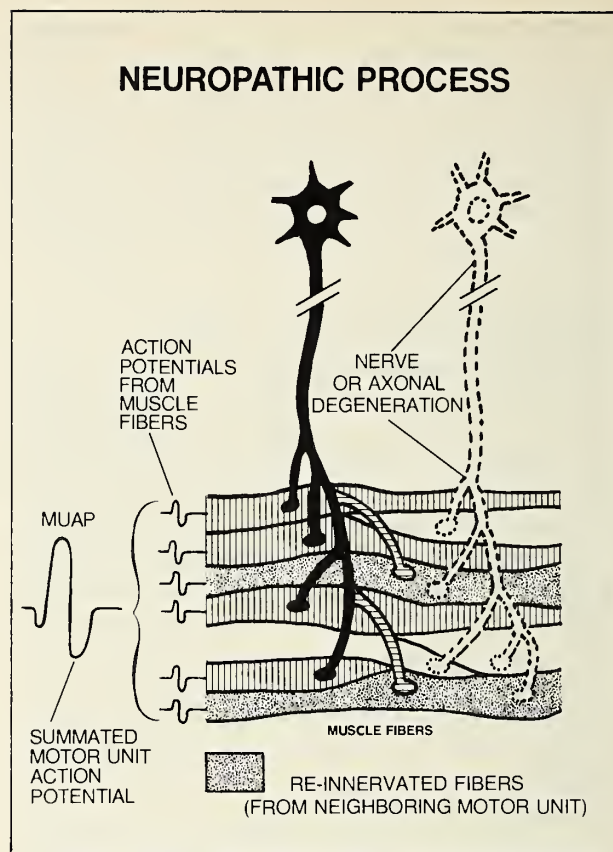


Figure 4. Diagrammatic representation of a motor unit in lower motor neuron disease. Motor unit on the right has undergone Wallerian degeneration. Motor unit on the left is intact and has sprouted to supply 2 extra muscle fibers. Because of the sprouting, the generated MUAP becomes greater in amplitude and duration than it would normally. Fewer such motor units are required to generate a given strength of contraction than is noted under normal conditions and especially compared to myopathic disease.

given strength of contraction (to give a certain amount of mechanical resistance from the muscle), more MUAP's are recruited. Therefore, the oscilloscope screen may fill fairly quickly with small MUAP's in a myopathic process. By contrast the neuropathic disorder causes loss of certain neurons with the result that certain "orphaned" muscle fibers are adopted by adjacent intact or vital neurons giving a larger motor unit (Figure 4). For a given strength of contraction in neuropathy, fewer motor units may be evident on the oscilloscope screen.

Nerve Conduction Studies

Peripheral nerve conduction studies can be obtained routinely by the passage of electrical

currents through the skin overlying the nerves. The result is a synchronized muscle contraction (in motor nerve conductions) which may be recorded over the muscle innervated with the recording electrode. This recorded potential is called an M-response. Similarly, a smaller potential may be recorded over many sensory nerves for sensory conductions. A nerve conduction velocity can be obtained by measuring the latencies (time for response to occur relative to stimulus at 2 points along the nerve), and by subtraction one obtains the time for conduction between the 2 points of stimulation. By dividing the distance between the 2 points by the time needed for the impulse to travel this distance, a nerve conduction velocity (NCV) is obtained. The nerves most commonly studied are median (sensory and motor), ulnar (sensory and motor), facial, radial sensory, musculocutaneous, femoral, peroneal, tibial and sural sensory. H-reflex studies and F-waves and blink reflexes are used in an attempt to assess more proximal conductions of nerves. Discussion of technique and physiology for this can be found in texts cited in the paper.

Diseases in Which EMG and Nerve Conduction Study are Helpful

Although this is not intended to be an all inclusive list, several illustrative or typical diseases giving abnormalities on EMG will be included (Figure 5).

1) *Diseases or disorders affecting the anterior horn cell seen on EMG include: amyotrophic lateral sclerosis, Werdnig Hoffmann, Kugelberg-Wielander, and Poliomyelitis.*

2) *Axonal disease or disorders include: peripheral nerve injury, peripheral neuritis or neuropathy, peripheral entrapment neuropathy, radiculopathy, Guillain-Barré syndrome, Charcot-Marie-Tooth neuropathy, etc.*

3) *Neuromuscular junction disorders include: myasthenia gravis and myasthenic syndrome.*

4) *Cell membrane disorders, such as periodic paralysis, myotonia or potassium imbalance.*

5) *Muscle fiber diseases, such as muscular dystrophy and polymyositis.*

The nerve conduction studies add much information about the speed of conduction of the nerve impulses to consider generalized neuropathies particularly involving the myelin sheath, as well as local neuropathies, e.g., entrapment neuropathies. This is a particularly

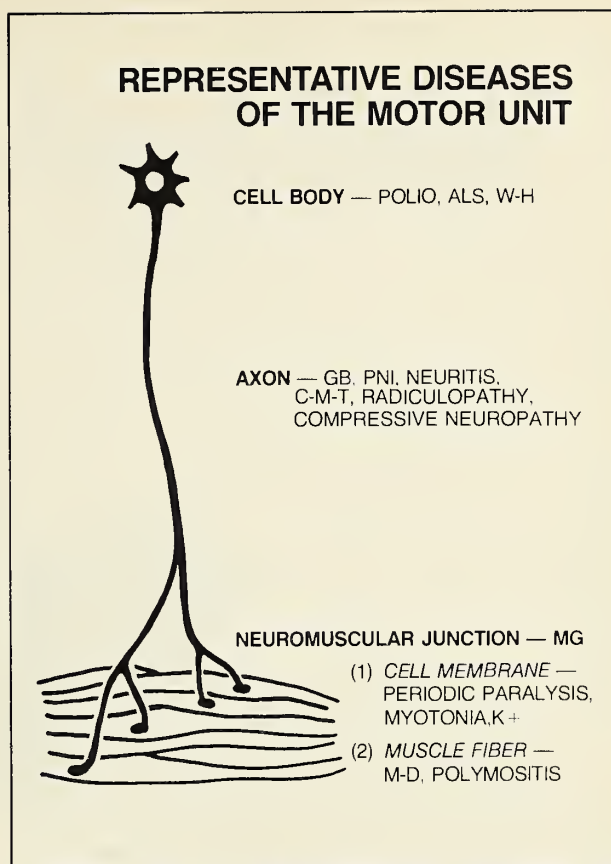


Figure 5. Conditions affecting the different parts of the motor unit. ALS = amyotrophic lateral sclerosis; W-H = Werdnig-Hoffmann disease; G-B = Guillain-Barré; PNI = peripheral nerve injury; C-M-T = Charcot-Marie-Tooth disease; MG = myasthenia gravis; K⁺ = potassium imbalance; M-D = muscular dystrophy.

useful function in nerve conductions in the objective determination and documentation of entrapments, such as a carpal tunnel syndrome, ulnar nerve entrapment or compression at the elbow or wrist, and in peroneal neuropathy at the fibular head and in considering a tarsal tunnel syndrome (tibial nerve entrapment at the ankle or foot), to give commonly considered entrapments. Additional less common entrapment disorders would add unduly to the length of this paper and one is referred to the textbook references on EMG. Decompression of nerves for treatment of entrapment neuropathies is a common procedure. Nerve conduction studies are useful in documenting location and degree of slowing of the nerve examined. The conduction studies assist also in assessing the predisposing factors and other concomitant problems of the nerve

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(e.g. peripheral neuropathy, brachial plexopathy, etc.).

Back pain and injury have become relatively commonplace in this industrial age. In evaluation of neck, low-back and extremity pain, EMG often becomes the most reasonable diagnostic tool beyond the clinical examination. Its value in the determination of root pathology (and its differentiation from the many peripheral entrapment neuropathies as well as plexus involvements) is well substantiated. The benign nature of the examination with no premedication required makes it a very good test to perform as an outpatient as well. As noted in the *IMS JOURNAL*,¹ this past year, EMG and myelography should not be considered in a mutually exclusive way, but as complementary for more complete assessment. EMG (a neurophysiological study) and myelography (an anatomic study) can never truly be used as substitutes for one another. Based upon EMG findings the myelogram frequently may be considered the needed anatomic correlate to determine the extent or severity of disc, boney, or tumor pathology. As noted earlier, if every disc deformity on myelography were considered to be the ultimate requirement for surgery, many asymptomatic people, ages 50 to 60 or older, would become candidates for surgery. Correlation with clinical findings and/or EMG is commonly essential to determine those patients who will benefit from surgery in our experience. With recurrent back pain postoperatively, EMG can provide helpful information which may be obscured with post-op findings on myelography.

Therefore, in conditions presenting with pain, sensory disturbance, or weakness, EMG and nerve conduction studies can provide reliable objective evidence of the involvement of the motor unit. In upper motor neuron diseases, the electromyogram may be of value in a negative way, that is to exclude (or evaluate)

associated disease of the lower motor neuron. It is often of value in serially following nerve injuries or nerve involvement and in legal medicine as an objective record of neuromuscular function.

The electromyographer must be a physician since no standard procedure can be outlined ahead of time which would allow a technician to perform the examination for later interpretation by the physician. It is a rule, rather than an exception, that modifications must be made during the examination as electromyographic findings become apparent. The critical importance of the examiner's actions at the moment of the displayed potential is an additional reason why the immediate interpretation is of extreme importance. The training of an electromyographer should include several months under the close supervision of experienced electromyographers, in addition to a well structured didactic program to understand not only the scope, but the idiosyncrasies and potentials for misdiagnosis or missed diagnosis in the many disorders of the motor unit. A weekend course or even several weeks training will not suffice. Technicians and paramedical personnel have little or nothing to offer in electromyography, except as an assistant under the direct supervision of a trained physician electromyographer.

SUMMARY

The electromyograph provides a means to assess the motor unit objectively. It is not a substitute for a careful history and physical examination, but when used in conjunction with the clinical findings, it can provide the guide toward accurate diagnosis. It is hoped this paper will help the clinician use EMG properly, and understand its potential as well as its limitations.

REFERENCES

The references noted with this paper are available on request either from the author or the *JOURNAL OF THE IOWA MEDICAL SOCIETY*.

1982

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COMMENTING EDITORIALY

MARION E. ALBERTS, M.D.
SCIENTIFIC EDITOR

IS ASPIRIN IMPLICATED WITH REYE'S SYNDROME?

ASPIRIN (acetylsalicylic acid) is a drug that is both praised and condemned. Despite the derogatory claims, it is one of the drugs most used by physicians and the public.

The ancients knew the antipyretic properties of willow bark (*Salix albus*). We have seen the evolution of the bitter glycoside, salicin, from the willow bark to the formulation of acetylsalicylic acid in the 1890's. This progression has been such that this group of compounds now hold a major position in producing analgesia and antipyresis.

The use of aspirin in the treatment of arthritis (rheumatic fever and rheumatoid arthritis, as well as degenerative arthritis) has withstood the test of time. Newer drugs have been introduced; yet aspirin still is foremost. Aspirin has been advocated by some in prevention of arterial and venous thromboses. For many years this simple drug has been depended upon for the treatment of fever and various aches and pains.

There has been a serious competitor to aspirin in recent years, especially in the role of antipyresis. Acetaminophen has become very popular despite reports of hepatic toxicity from overdosage. Television advertisements extol the greatness of acetaminophen; extra strength preparations, liquid forms, and combinations with antihistamines and decongestants, as well as codeine, are available. The highly

touted "extra strength" form presents an interesting facet of merchandising. The recommended adult dose of regular strength (325 mg per tablet/capsule) is equal to 3,900 mg/day, while of the extra strength (500 mg per tablet/capsule) is 4,000 mg/day. So what is the difference? The single dosage is a bit heavier, but there is no appreciable difference in the recommended total daily dose.

Aspirin has had a strong indictment made against it in recent months. Review of epidemiologic studies of the rare childhood disease, Reye's Syndrome, has shown a probable contribution by salicylates to that condition. In February, the U.S. Center for Disease Control issued a warning to avoid, if possible the use of aspirin to treat fever in children afflicted with influenza or chicken pox. A panel of consultants has concluded from studies that aspirin *may* be a factor in the development of Reye's Syndrome, but there is no absolute proof that it actually causes the disorder.

Needless to say, these reports, have caused considerable confusion among parents as well as physicians. The committee did not recom-

"We must be judicious in our prescribing habits, as well as in the general advice we give our patients."

mend acetaminophen as an alternate to aspirin in chicken pox or influenza because they "didn't have the information about risks and benefits." It is questioned whether any fever control medications should be given when symptoms of influenza or chicken pox arise. Alternatives such as increased fluid intake and tepid baths are recommended. I have gone on record previously over the concerns about fever.* Now we have a serious indictment against using drugs in treating the fever which may accompany two specific viral diseases. Will there be more? Surely there are other instances when a disease is overtreated. We must do no harm in our ministrations to the sick. We must be judicious in our prescribing habits, as well as in the general advice we give our patients.

"Imperative drugging — the ordering of medicine in any and every malady — is no longer regarded as the chief function of the doctor." — SIR WILLIAM OSLER (1849-1919): *Aequanimitas with other Addresses, "Medicine in the Nineteenth Century."* — M.E.A.

* Alberts, M.E., Offerings on the altar of the "Glass Goddess." J. Ia. Med. Soc., 57:681, July, 1967.

A MAJORITY OF ONE

I DON'T like HMOs because they want a handicap. Handicaps are OK in golf, but this is not a game — and the cost of care should be the real cost without hidden grants that defray some expenses so that the final figure is *not* the real cost.

I don't like HSAs and CONs. I think these entities add to the cost without increasing the availability or the quality of care.

I don't like blind criticism of peer review, and I don't like trying to hide behind semantics to cover up a basic desire to scuttle peer review by saying "Let's call it voluntary and then, by God, we won't have to do it at all."

I don't like third party payors and the other interlopers between the doctor and the patient. But I think they are necessary in our society,

and I'm going to try to give my patients the best I can in spite of them.

I don't like all the paper work connected with helping patients, but I don't think we can do away with paper work and still keep track of all the different facets of patient care.

I heard a doctor say the other day that it isn't as much fun anymore as it used to be, meaning the practice of medicine.

Well, I thought about that for awhile and I guess maybe it's true. Maybe we have to work harder because of the frustrations and distractions caused by government forms and insurance forms; progress notes and peer review. But the basic ingredient — the patient and the doctor meeting and interacting and trying to help is still there. The human, loving feeling is still there. The trust we have for each other is still there. I think that's what medicine is about. How about you? — DENNIS J. WALTER, M.D., *Des Moines, Member, Scientific Editorial Panel*

Letter to Editor

APPRECIATE THE COMMENT

Dear Editor,

One rainy evening recently, after all my responsibilities of the day had been fulfilled, I found myself with time on my hands and nothing to do. Then — an inspiration! Why not read one of Dr. Alberts' editorials in the JOURNAL OF THE IOWA MEDICAL SOCIETY?

Now you and I know that it is always uncertain as to whether anyone ever reads the editorials in the JOURNAL, but bear in mind that on

this particular evening there seemed to be nothing else to do. So I turned to the May 1982 issue of the JOURNAL and found your editorial, "Use the Crutch Wisely." Well, I can't say too much in complimenting you on the viewpoint expressed and on the clarity of your writing. In a word, I thought the editorial was extremely well done, and I would urge others to read it.

The purpose, therefore, of this short note, Dr. Alberts, is threefold: to let you know that someone read the editorial, to let you know that someone thought very highly of it, and to let you know that someday, if the conditions are just right, I may read another of your editorials. — DANIEL F. CROWLEY, M.D., *Des Moines*

RECENT BOOKS

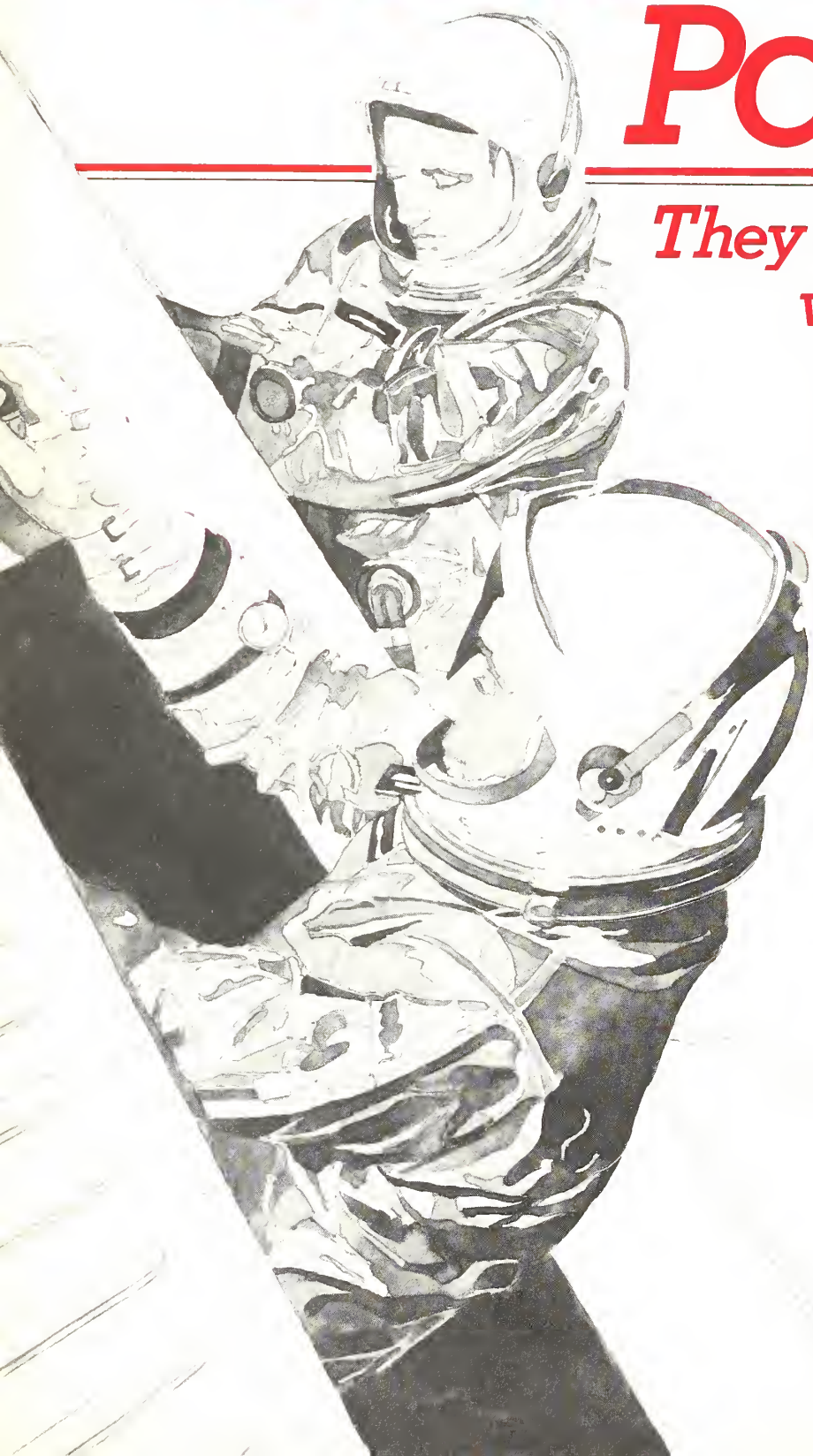
CURRENT PEDIATRIC DIAGNOSIS AND TREATMENT (7th Edition), 1982, by C. Henry Kempe, Henry K. Silver and Donough, O'Brien. Lange Medical Publications, Los Altos, California. Price, \$26.00.

A LAND BEYOND TEARS, 1982, by Barry N. Kaufman and Suzi L. Kaufman. Doubleday & Co. Inc., New York. (How a family faced the terminal illness of the mother; doubts, fears, and anger conquered by love.) Price, \$13.95.

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* Meeting of Am Soc Colon/Rectal Surgeons, May 1980

** Based on total prescriptions filled for hemorrhoidal preparations during the first three quarters of 1981. The National Prescription Audit, IMS America Ltd, Sept 1981.

* 1981 data from leading marketing research organization.

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Indications and Usage: Anusol-HC Suppositories and Anusol-HC Cream are adjunctive therapy for the symptomatic relief of pain, itching and discomfort in external and internal hemorrhoids, proctitis, papillitis, cryptitis, and fissures, incomplete fistulas, pruritus ani and relief of local pain and discomfort following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present. After acute symptoms subside, most patients can be maintained on regular Anusol[®] Suppositories or Ointment.

CONTRAINDICATIONS
Anusol-HC Suppositories and Anusol-HC Cream are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparations.

WARNINGS
The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy, they should not be used unnecessarily on extensive areas, in large amounts or for prolonged periods of time.

PRECAUTIONS
General
Symptomatic relief should not delay definitive diagnoses or treatment.
Prolonged or excessive use of corticosteroids might produce systemic effects.

If irritation develops, Anusol-HC Suppositories and Anusol-HC Cream should be discontinued and appropriate therapy instituted.

In the presence of an infection the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly, the corticosteroid should be discontinued until the infection has been adequately controlled.

Anusol-HC is not for ophthalmic use.

Pregnancy
See "WARNINGS"
Pediatric Use

Care should be taken when using the corticosteroid hydrocortisone acetate in children and infants.

DOSEAGE AND ADMINISTRATION
Anusol-HC Suppositories—Adults: Remove foil wrapper and insert suppository into the anus. Insert one suppository in the morning and one at bedtime for 3 to 6 days or until inflammation subsides. Then maintain comfort with regular Anusol Suppositories.

Anusol-HC Cream—Adults: After gentle bathing and drying of the anal area, remove tube cap and apply to the exterior surface and gently rub in. For internal use, attach the plastic applicator and insert into the anus by applying gentle continuous pressure. Then squeeze the tube to deliver medication. Cream should be applied 3 or 4 times a day for 3 to 6 days until inflammation subsides. Then maintain comfort with regular Anusol Ointment.

NOTE: If staining from either of the above products occurs, the stain may be removed from fabric by hand or machine washing with household detergent.
Store between 59°-86°F (15°-30°C)
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DRUG THERAPY REVIEW



UNIVERSITY OF IOWA HOSPITALS AND CLINICS

REYNOLD SPECTOR, M.D., Editor

THROMBOLYTIC THERAPY: CONTROVERSIAL ASPECTS

TREATMENT GOALS in thromboembolic disease are twofold. First, the hypercoagulable state must be terminated and existing thrombi prevented from extension or embolization, and secondly, vascular patency must be restored and venous valvular function preserved. While traditional anticoagulation with heparin or warfarin is capable of terminating most hypercoagulable states, it does little to promote the lysis of thrombi. Failure to accomplish clot lysis may contribute to death in cases of massive pulmonary emboli (PE) and in patients with deep venous thrombosis (DVT) it results in the "postphlebotic" syndrome characterized by skin ulceration, pain, edema, and pigmentation.

Streptokinase (SK) and urokinase (UK) are pharmacologic agents capable of promoting thrombolysis. They offer a means to achieve rapid restoration of vascular patency. Although these agents have been under investigation for over 20 years, several important issues regarding their use are not resolved.

This information for Iowa physicians is furnished and sponsored by the University of Iowa Hospitals and Clinics.

These issues include efficacy, potential benefits and risks, indications for use, laboratory control, and regimens of administration.

Urokinase, which has been approved for use by the Food and Drug Administration (FDA) in pulmonary embolism, is a naturally occurring serine protease formed by uroepithelium. Presently UK is isolated from cultured human fetal renal tissue. On a mechanistic level, UK enzymatically converts plasminogen to plasmin, an active enzyme, which directly degrades fibrin and fibrinogen. Streptokinase is a product of a group C β -hemolytic streptococcus. It acts as a cofactor promoting plasminogen to plasmin conversion by binding to plasminogen. In contrast to UK, SK does not directly activate plasminogen. SK is now approved by the FDA for use in pulmonary embolism, deep venous thrombosis, and clotted arteriovenous cannulae.

Several reports in the literature document the efficacy of these agents in promoting thrombolysis in patients with pulmonary embolism.¹⁻⁴ The most informative of these is the NIH-sponsored Urokinase Pulmonary Embolism Trial (UPET), which compared the rate of resolution of emboli in patients randomized to treatment with either UK plus heparin or heparin alone. Based on hemodynamic measurements, lung scanning, and angiography, patients receiving UK had significantly more rapid clearance of pulmonary emboli, especially in cases with a short clinical history (less than 48 hours), massive embolization (involvement of two or more lobar arteries), or shock. No improvement in 2-week survival was seen in the patients treated with UK. However, it was not the purpose of the study to determine the effect of thrombolytic therapy on survival and the large number of patients required to have demonstrated a reduction in mortality would have made the study impractical. The suggestion exists, however, that thrombolytic agents might offer a hemodynamic advantage in highly selected patients with recent massive embolization or shock.

Traditional therapy of DVT with heparin has resulted in a marked reduction in subsequent pulmonary embolism.⁵ However, in cases of extensive proximal DVT, heparin does not appear to reduce significantly the incidence of the postphlebotic syndrome. A number of reports in the literature have compared the thrombolytic efficacy of SK plus heparin to

heparin alone in patients with DVT.⁶⁻¹⁰ Although many of these studies suffer from one or more flaws in their design, an overview of the data available would indicate that in patients with the recent (less than 4 days) onset of proximal DVT, substantial to complete clot lysis occurs in approximately 50% of SK-treated patients. Reports also exist detailing resolution of symptomatic thrombotic disease of 2 to 3 weeks' duration when SK is administered for prolonged periods of time (4 to 10 days).¹¹ In contrast, less than 10% of patients treated with heparin alone demonstrate clot lysis. From this data it has been argued that rapid clot lysis with SK may preserve venous valvular function and reduce the subsequent development of the postphlebotic syndrome. One controlled study compared SK and conventional heparin therapy with follow-up at a reasonably long interval.⁹ The results of this and other studies which support the use of SK in selected cases require confirmation in further carefully controlled and randomized investigations.

While potential benefits of thrombolytic therapy remain to be substantiated, potential risks are more clearly defined. Thrombolytic intervention cannot be undertaken lightly. Fever is commonly encountered in patients receiving SK and rare cases of anaphylaxis have been reported. However, the major complication with these agents is bleeding. Bleeding from prior trauma such as venipuncture sites results from the dissolution of hemostatic plugs. In addition, the hypofibrinogenemia and increased fibrin degradation products resulting from the use of SK or UK may lead to bleeding after trauma. The incidence of significant hemorrhage requiring transfusion is highly variable from study to study but appears to approach 10 to 20%. In contrast, the risk of hemorrhagic complications with heparin is generally reported to be approximately 5% and may be as low as 1% when continuous infusion techniques and laboratory control with the activated partial thromboplastin time are employed.¹² Because of the substantial risk of hemorrhage, generally accepted contraindications to the use of thrombolytic therapy include major surgery within the preceding 10 days, the postpartum state, concomitant hemostatic defects, and disorders predisposing to intracranial bleeding. If therapy is undertaken it is of importance to avoid inva-

TABLE I

	Streptokinase	Urokinase
Source	Group C streptococcus	Human fetal kidney cultures
Molecular weight	45,000	92,000 (native) 34,000 (tissue culture)
Mechanism of action	Plasminogen cofactor	Serine protease
½ Time	10 minutes	11-16 minutes
Pyrogen	Yes	No
Cost	\$200/24 hours	\$2,000/12 hours
FDA-approved indications	Pulmonary embolism Deep venous thrombosis Clotted A-V fistula	Pulmonary embolism

sive procedures, including venipuncture, unless clearly indicated.

Because the risk-benefit ratio with thrombolytic therapy is undefined, it is difficult to formulate precise indications for its use. However, in our opinion, treatment with UK or SK deserves consideration in 2 clinical situations: 1) the rare patient with massive pulmonary embolism of recent occurrence presenting in shock; 2) the younger patients with venographically documented extensive proximal

(Please turn to page 296)

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DVT and no evident predisposition to recurrent DVT. The first patient could be the beneficiary of a survival advantage, while the second patient could avoid the belated sequelae of obstructive venous disease.

If employed, thrombolytic therapy should not be viewed as a replacement for heparin. Rather, it is an adjuvant to traditional anticoagulant therapy and most frequently is used as a 12- to 72-hour course, after which heparin is continued as necessary. The choice of initial dosage should be governed by the manufacturer's recommendations. Unfortunately, clear guidelines for laboratory control do not exist. We feel that before beginning therapy, the thrombin clotting time (TCT) should be less than 2 times normal and the fibrinogen and platelet count should be normal. During therapy it is advised that the TCT be prolonged from 2 to 6 times the normal control. Therapy should be individualized when the TCT fails to fall within these recommended limits.

This report has been written to point out a number of unresolved issues concerning the use of thrombolytic agents. Physicians using

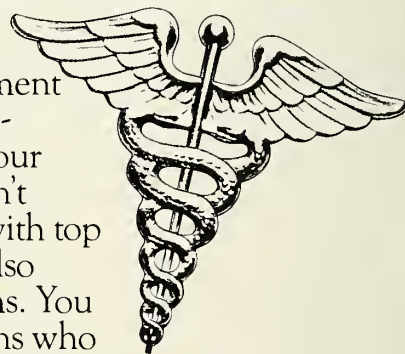
these agents for approved indications must be aware of these issues and take careful note of the new developments in this field — M. Michael Guffy, M.D., Pete Lollar, M.D., Jonathan Goldsmith, M.D., Department of Internal Medicine, Division of Hematology-Oncology.

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STATE DEPARTMENT/ PUBLIC HEALTH

CHRONIC RENAL DISEASE PROGRAM

THE CHRONIC RENAL DISEASE PROGRAM (CRDP) was established in 1972 by the Iowa General Assembly with responsibility for implementation and administration mandated to the State Department of Health. The purpose of the program is to provide financial assistance to eligible dialysis and transplant patients with end-stage renal disease.

The types of financial assistance that may be provided include:

- Hospital and physician charges;*
- Home dialysis supply and equipment charges;*
- Hired home assistant fees;*
- Pharmaceuticals;*
- Travel to dialysis and transplant facilities;*
- Lodging for home dialysis and transplant patients in certain situations, and*
- Health insurance premiums*

This information on public health matters is furnished and sponsored by the Iowa State Department of Health.

TABLE I
FINANCIAL CRITERIA

Family Number	Non-Farm	Farm
1	\$ 4,210	\$3,590
2	5,590	4,760
3	6,970	5,930
4	8,350	7,100
5	9,730	8,270
6	11,110	9,440

Increase by \$1,380 for each additional non-farm family member.

Increase by \$1,170 for each additional farm family member.

Since the CRDP is a last resort program, all other resources available to patients must first be identified. Such resources include personal assets, private insurance coverage, Medicare, etc. Social Security extended Medicare coverage to dialysis and transplant patients in July of 1973. The coverage is the same as for other Medicare recipients; Part A for inpatient charges and Part B for outpatient charges. Eligibility for assistance and the type(s) of assistance that may be provided are based upon the applicant's medical status and the resources available for payment of renal disease-related expenses.

Specific financial criteria are utilized to place each eligible applicant into one of 5 financial categories using (as a base) the 1981 Federal Community Services Administration Poverty Level Income (PLI) Guidelines shown in Table I:

Table II displays the financial categories and the medical status of the 284 patients eligible to receive assistance from the CRDP as of April, 1982.

(Please turn to page 298)

TABLE II
FINANCIAL CATEGORIES/MEDICAL STATUS

	(1) 150% of PLI	(2) 200% of PLI	(3) 250% of PLI	(4) 300% of PLI	(5) 300% of PLI & Above	Total
Center hemodialysis	75	20	17	3	3	118
Center peritoneal dialysis	1	1	0	0	0	2
Home hemodialysis	8	7	2	1	3	21
Home peritoneal dialysis	2	2	0	0	2	6
Continuous ambulatory peritoneal dialysis	17	9	2	0	5	33
Transplant	<u>50</u>	<u>32</u>	<u>16</u>	<u>3</u>	<u>3</u>	<u>104</u>
Total	153	71	37	7	16	284

STATE DEPARTMENT/PUBLIC HEALTH

The patients in category 1 have resources of less than 150% of PLI and are eligible to receive the most assistance. Those in category 5 have resources 300% of PLI or greater and receive the least assistance.

Transplantation and/or dialysis is being provided to Iowa patients currently receiving assistance from the CRDP at the following facilities:

Bishop Clarkson Memorial Hospital, Omaha, Nebraska
Henry County Health Center, Mt. Pleasant, Iowa
Iowa Lutheran Hospital, Des Moines, Iowa
LaCrosse Lutheran Hospital, LaCrosse, Wisconsin

Marian Health Center, Sioux City, Iowa
Mary Greeley Medical Center, Ames Iowa
Mayo Clinic, Rochester, Minnesota
St. Francis Hospital, Waterloo, Iowa
St. Joseph Hospital, Omaha, Nebraska
St. Luke's Hospital, Davenport, Iowa
Trinity Regional Hospital, Fort Dodge, Iowa
Tri-State Dialysis Unit, Dubuque, Iowa
University Hospitals and Clinics, Iowa City, Iowa
Veterans Administration Hospital, Iowa City, Iowa

For more specific information call 515/281-4960 or write: Chronic Renal Disease Program, Iowa State Department of Health, Lucas State Office Building, Des Moines, Iowa 50319.

May 1982 Morbidity Report

Disease	May 1982 Total	1982 to Date	1981 to Date	Most May Cases Reported From These Counties
Amebiasis	4	40	2	Baone, Delaware, Scott
Brucellosis	0	1	0	
Chickenpox	922	5448	6527	Clinton, Dubuque, Linn
Compylabacter	16	80		Dubuque, Marshall, Lee
Cytomegalavirus	4	18	10	Jahnsan, Clinton
Eaton's Agent infection	20	97	11	Palk, Marshall, Johnson
Encephalitis, virol	3	9	7	Waadbury, Clinton
Erythema infectiosum	21	184	1069	Unian, Muscatine, Marshall
Gastroenteritis (GIV)	862	7726	11968	Linn, Black Hawk, Dallas
Giardiasis	10	41	13	Des Moines, Chickosaw, Jackson
Hepatitis, A	4	41	130	Clay, Delaware, Des Moines
Hepatitis, B	6	41	33	Pottowottomie, Polk
Hepatitis, Non A-B	1	7		Johnson
Hepatitis type unspecified	5	12	26	Keakuk, Manrae, Clay
Herpes Simplex	26	142	85	Jahnsan, Palk, Lynn
Herpes Zoster	0	9	4	
Histoplasmosis	2	13	5	Palk, Webster
Infectious mononucleosis	17	117	186	Linn, Black Hawk, Flayd
Influenza, lab confirmed	29	67	191	Polk, Linn, Baone

Disease	May 1982 Total	1982 to Date	1981 to Date	Most May Cases Reported From These Counties
Influenza-like illness (URI)	3396	25800	47251	Linn, Johnson, Pottawattamie
Legionnaire's Meningitis	0	13		
aseptic	1	11	24	Lee
bacterial	9	23	68	Buena Vista, Davis, Lee
meningococcal	0	5	16	
Mumps	6	27	38	Polk, Warren, Clinton
Pertussis	2	3	2	Polo Alto, Pottawattamie
Rabies in animals	24	166	402	Scattered
Rheumatic fever	1	3	6	Buchanan
Rubella (German measles)	0	0	3	
Measles	0	0	1	
Salmonellosis	18	118	92	Dubuque, Polk, Scott
Shigellosis	4	21	16	Palk
Toxic Shock Syndrome	1	7		Jefferson
Tuberculosis				
fatal ill	8	43	42	Scattered
bact. pos.	7	32	26	Scattered
Venereal diseases:				
Gonorrhea	370	1917	1849	Palk, Scott, Black Hawk
Syphilis	3	14	12	Polk, Henry

Laboratory Virus Diagnosis Without Specified Clinical Syndrome: Guillain-Barre — 1, Scott; Ascariasis — 3, Jahnsan.

ABOUT IOWA PHYSICIANS

Dr. W. S. Pheteplace, Davenport, is retiring as medical director of the Mississippi Valley Regional Blood Center, following 35 years of service. Dr. Pheteplace was instrumental in starting the Scott County Blood Bank in 1947 and also was a leader in the merger between the Rock Island and Scott County Blood Banks that resulted in the formation of the Mississippi Valley Regional Blood Center. . . . **Dr. Robert P. Smith** has joined the family practice faculty at Broadlawns Medical Center in Des Moines. Dr. Smith is a 1980 graduate of the family practice residency program at BMC and has been practicing in Richland Center, Wisconsin. Of

the 10 graduates in the 1982 family practice residency program, 4 will practice in Iowa and 1 will enter the Air Force. **Dr. Jeffrey J. Goerss** has joined the Spirit Lake Medical Center in Spirit Lake and **Dr. Donald L. Skinner**, the McCrary-Rost Clinic in Lake City. **Dr. David E. Swieskowski** will become an associate of **Dr. Tom Peacock** in Des Moines and **Dr. Lloyd J. Thurston**, an associate of **Dr. Charles D. Bendixen** in Marshalltown. **Dr. Joseph L. Davis** has joined the Air Force.

Dr. Dorothy Gildea, Davenport, was presented the "Citizen of the Year" award at a recent meeting of Family and Children's Services in Davenport. The award is given to the person who best contributes in a professional field and also as a private citizen to the betterment of family life. . . . **Dr. Gary Van Ert** has joined **Dr. G. W. Richardson** in family practice in Clarinda. Dr. Van Ert received the M.D. degree at the University of Nebraska School of Medicine and completed his family practice residency at Sioux Valley Hospital in Sioux Falls, South Dakota. . . . **Dr. Mary G. Paulus**



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recently opened a solo practice of orthopedic surgery in Carroll. Dr. Paulus received the M.D. degree at the Medical College of Pennsylvania in Philadelphia, and served her internship and residency at Hahnemann Medical College and Hospital in Philadelphia. Prior to locating in Carroll, Dr. Paulus practiced in Conroe, Texas.

DEATHS

Dr. Galen C. Boller, 69, Waterloo, died May 11 at his home. Dr. Boller received the M.D. degree at the U. of I. College of Medicine and interned at Grant Hospital in Chicago. Following military service in World War II, he practiced in Calmar, Iowa, for three years. In 1949, he began his internal medicine residency at Los Angeles County Hospital in Los Angeles, California and located in Waterloo in 1951. Dr. Boller was a member of the American College of Cardiology; American College of Internal Medicine; and American Society of Railway Surgeons.

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Perpetuating Medical Care



THAT IOWA MEDICINE is duty bound to perpetuate itself is usually accepted as given. Interestingly, we have seen this theme underscored in several ways in recent weeks. Three instances are noted briefly here.

First of all, we call reader attention to the April 30 annual meeting of the board of directors of the Iowa Medical Foundation. As most Iowa physicians know, a major, long-time endeavor of the Foundation has been one of loaning money to medical students. In the 30-year history of the Foundation almost \$1 million has been loaned to 418 deserving Iowans attending medical school. And, it is a tribute to these loan recipients, that the record of repayment has been exceptional, allowing the money to flow out again to other students.

The real importance of our reference to the annual meeting of the Iowa Medical Foundation lies in the action of the board to allocate \$120,000 in loan funds for the 1982-83 academic year. This increased sum recognizes significantly diminished student aid potential from the government and elsewhere. This \$120,000 budget item is just about twice as much as the Foundation has loaned in each of the past several academic years.

Money to support the Foundation student loans and other of its projects has been and is given voluntarily, mostly by Iowa physicians as contributions and memorials. It is a meritorious program.

SECONDLY, in our identification of recent references to the perpetuation of quality medical care in Iowa, on May 2, the policy-making Iowa Medical Society House of Delegates, consisting of physician representatives from across the state, said the Society, as an instrument of the profession, should:

- Remind legislators and others of the public interest in the quality of medical education and the training of the physicians of the future.

- Urge the Iowa General Assembly to adequately fund and support the University of Iowa College of Medicine.

- Continue to seek financial resources and investigate promising private sector programs that might assist medical students in financial need.

LASTLY, in our references to recent comments about assuring the future of medical care in Iowa, on May 14, Dean John W. Eckstein, M.D., had some salient thoughts for this year's U. of I. medical graduates.

In saluting the graduates, their families and the faculty who taught them, Dr. Eckstein compared the new physicians with those who preceded them 100 or more years ago. In doing so, Dr. Eckstein described the panorama of progress — occurred, occurring and to occur.

But importantly, Dr. Eckstein dealt with change and challenge:

"The changes taking place around us now will have important effects on medical practice, and it is vital for the good of the profession and the welfare of our patients that you consider these matters so you may interpret them to policy-makers and others in the communities in which you will study and practice. You will have a responsibility to help society set proper priorities in this increasingly complex world where individual human needs are in serious competition with other important priorities. We must remember that biomedical research and good health care are vital to the success of almost all social programs."

Dr. Eckstein placed before his listeners the economic challenges facing medical education now and in the time to come. And in commenting on change which may take place in the future patterns of medical practice, he summed it up for the new graduates and for all in the medical profession.

"For the good of our patients, we must do everything possible to maintain the quality of medical education and the opportunities for science to advance and to be applied in medical care."

July 1982

Journal of the Iowa Medical Society

THINGS YOU SHOULD KNOW

STATEWIDE HMO OPTION

An August meeting is scheduled between Blue Cross/Blue Shield officials and the IMS Committee on Alternative Delivery Services to discuss BC/BS ideas with respect to implementation of a statewide health maintenance organization. The provision of expertise by the Society was encouraged by the 1982 IMS House of Delegates.

STATE BOOST OF 32%

Blue Cross and Blue Shield of Iowa announced in July a 32% jump in health coverage rates for some 28,000 state employees. This boost could run to nearly \$500 more per year for certain Iowa workers. State Insurance Commissioner Bruce Foudree was reported to be spearheading a review of the matter to see if reductions are possible. The state employees program is BC/BS's largest.

NAMED TO HEALTH BOARD

Edward H. Scott, M.D., Dubuque ophthalmologist, has been appointed to a 3-year term on the State Board of Health. Dr. Scott succeeds Aaron Randolph, M.D., Anamosa, who is completing a second term on the board.

ADVANCED NURSING REGS

Further proposed regulations covering nurse anesthetists, family nurse practitioners, pediatric nurse practitioners and nurse midwives were discussed at a July meeting of IMS representatives with officials of the Iowa Board of Nursing.

MENTAL HEALTH RULES

A spokesman for the IMS Committee on Psychiatric Care raised concerns at a July public hearing of the standards committee of the State Mental Health/Mental Retardation Commission over proposed rules covering mental health centers. Changes were encouraged in items relating to medications, confidentiality and personnel utilization.

COMING UP IN SEPTEMBER

Cesarean sections in 92 Iowa hospitals are analyzed in a shared study to be reported in the September issue of the IMS JOURNAL. This report is the fourth in a series compiled by the Iowa Foundation for Medical Care in cooperation with the U. of I. College of Medicine and the IMS. A CME quiz worth one hour of Category I credit will accompany the September report.

EMS LEGISLATION

Identification of a physician as medical director was recommended as part of any state legislation regulating ambulance services and emergency personnel by the IMS EMS Committee at its June meeting. Also cited was the need for stipulating properly those individuals serving as resource designees, e.g., physician, physician's assistant, registered nurse or certified paramedic.

CANDIDATE SUPPORT ACTIVITY

Candidates for the Iowa General Assembly are being reviewed by IMPAC. Nominees to receive IMPAC financial assistance are selected by its board with various additional input. Additional physician contributions to IMPAC are welcomed.

IMPAC SMALL STATE MODEL

The program of the Iowa Medical Political Action Committee (IMPAC) was described at a recent 2-day Kansas City regional conference of the American Medical Political Action Committee. IMPAC director Tim Gibson explained how the Iowa organization works in the election process. Iowa was noted as a good model for small-to-medium-sized states.

PA CONFERENCE

Various educational topics (from dermatology to urology) were covered at the June conference of the Iowa Physician's Assistant Society. Eight Des Moines-area physicians took part in the program. State Health Commissioner Norman Pawlewski summarized current health care issues.

An added complication... in the treatment of bacterial bronchitis*



Brief Summary

Consult the package literature for prescribing information.

Indications and Usage: Cefclor® (cefclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae* (*Diphtheria pneumoniae*), *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci).

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Cefclor.

Contraindication: Cefclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Cefclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

Cefclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Cefclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinistix® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy: Although no teratogenic or antilethality effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Usage in Infancy: Safety of this product for use in infants less than one month of age has not been established.

Adverse Reactions: Adverse effects considered related to cefclor therapy are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Cefclor.

Hypersensitivity reactions have been reported in about 1.5

Some ampicillin-resistant strains of *Haemophilus influenzae*—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Cefclor.^{1,6}

In clinical trials, patients with bacterial bronchitis due to susceptible strains of *Streptococcus pneumoniae*, *H. influenzae*, *S. pyogenes* (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Cefclor.⁷

Cefclor®

cefclor

Pulvules®, 250 and 500 mg

percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthritis and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Cefclor® (cefclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain: Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic: Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic: Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal: Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). (100281R)

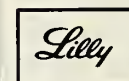
*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.

Note: Cefclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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8. Principles and Practice of Infectious Diseases (edited by G.L. Mandell, R.G. Douglas, Jr., and J.E. Bennett), p. 487. New York: John Wiley & Sons, 1979.



Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285. Eli Lilly Industries, Inc., Carolina, Puerto Rico 00630



QUESTIONS - ANSWERS

R. MELVIN HENDERSON, Ph.D.
Indianola, Iowa

HEALTH CARE COSTS

The work of the Governor's Commission on Health Care Costs is near completion. The outcome is highlighted here from the perspective of the Commission chairman. Dr. Henderson is Vice President and Dean of Academic Affairs at Simpson College.

The Governor's Commission has occupied a good portion of your time the past year or so. Are there 2 or 3 really distinctive items relating to Iowa health care delivery (good or bad) that have jumped prominently into your mind?

Iowa health care delivery is good, progressing, and accessible. Concerns for continued quality health care are generally shared across the manifold populations of Iowa. The medical community is also quite interested in managing health care costs. Most of us, when functioning as consumers, have developed a definition of quality which includes preferences for privacy, comfort, conveniences, and the latest developed technology. Further, we have come to believe that we truly deserve such prerequisites.

The work of the Commission is nearing completion. Is the concluding report achieving your original expectations?

Governor Robert D. Ray, when appointing the eleven-member Commission on Health Care Costs in April, 1981, charged the Com-

mission "... to develop a series of specific recommendations for improving the efficiency and effectiveness of Iowa's health care services delivery system while maintaining an acceptable quality of care, and also to pursue actively those coordinative strategies required for implementation of the Commission's recommendations." The report contains principles, corollaries, and specific recommendations which address both short-range and long-range escalating health care costs. The Commission has developed a report which can be significant for Iowans as the recommendations are implemented. Yes, our original expectations have been largely met.

Space prevents full listing of the Commission recommendations. Could you summarize the basic thrust of them in a few sentences?

The Commission (1) endorses an increased emphasis on market incentives and recognizes the need for enabling government legislation; (2) calls for legislative changes to allow, encourage and reward the creation of both horizontally and vertically integrated delivery systems; (3) recognizes the need for better information systems; (4) recognizes that hospital payment methods should not preclude needed flexibility for operational efficiency; (5) emphasizes the importance of controlling utilization of services; (6) and urges implementation of the recommendations by extant organizations committed to the inclusion of health care costs management as one of the major objectives of the industry.

Based on your involvement in this project, what suggestions might you have to help Iowa physicians in their future provision of medical care?

Iowa physicians will need to continue their emphasis upon the delivery of quality health care, accessible to Iowans, and affordable by Iowans; provide options for their patients (e.g., inquiry into the outpatient care of their patients, making suggestions to providers, employers, and insurers about options of health care for employees/consumers; foster discussion and action to overcome lag between inpatient and outpatient services, etc.); and in

(Please turn to page 327)



Outpatient surgery programs do reduce inpatient hospital days and have the potential to significantly impact health care costs in Iowa.

Blue Cross and Blue Shield of Iowa support outpatient programs when medically appropriate as a means to reduce the cost of health care in our state.

And recent data show trends toward more outpatient surgery in Iowa. In fact, many of the medical and surgical procedures suggested by the Iowa Foundation for Medical Care (IFMC) as

appropriate for an outpatient setting were performed on an outpatient basis last year.

We are encouraged that more physicians and their patients are realizing the benefits of outpatient surgery.

We all need to work to maintain a qualitative, affordable health care delivery system.



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Virus-Like Intranuclear Particles In Bronchiolar-Alveolar Cell Carcinoma

KYUNG-WHAN MIN, M.D., and

JOSEPH SONG, M.D.

Des Moines, Iowa

THE EVIDENCE of viral involvement in the pathogenesis of Jaagsiekte or epidemic sheep pulmonary adenomatosis,¹ and the histopathologic similarity between this disease in sheep and bronchiolar-alveolar cell carcinomas in humans, provides strong support for the concept of viral pathogenesis of these tumors. Thus, considerable research effort has been focused on the isolation and detection of virus from patients with these tumors through the use of tissue culture techniques and electron microscopy. The former has been unfruitful; however, the latter has produced encouraging results.

Intranuclear tubular inclusions similar to nucleocapsids of paramyxoviruses were first reported by Coalson *et al.* in 1970,² and by others^{3, 4} in patients with bronchiolar-alveolar cell carcinomas. These inclusions did bear superficial resemblances to viral nucleocapsids of

A case of bronchiolar-alveolar cell carcinoma is described in which ultrastructural studies revealed papova virus-like intranuclear particles. Their nature and significance are unknown, but further study is suggested of the well-known oncogenicity of papova group viruses.

paramyxoviruses and were assumed to be viral structures. However, there has been no subsequent evidence to support this assumption. Attempts to isolate a virus from the tumor tissue have been futile. Furthermore, identical intranuclear inclusions have been reported in alveolar epithelial cells of patients with benign fibrosing lung disease,^{3, 5, 6} hypertrophic cardiac muscle cells,⁷ and endometrial epithelial cells,⁹ suggesting that they are not viral in nature. Ultrastructural studies by the authors⁵ and others demonstrated a close relationship of the inner nuclear envelope to the formation of these intranuclear inclusions, and it is now widely believed that they are not viral, but rather represent a peculiar reactive change of the inner nuclear envelope due to yet unknown stimuli.

In a series of ultrastructural studies of pulmonary carcinomas, the authors encountered a case of bronchiolar-alveolar cell carcinoma in which hitherto undescribed virus-like intranuclear particles were found in the tumor cell nuclei. The findings are reported in this paper.

The authors are associated with the Department of Pathology at the Mercy Hospital Medical Center in Des Moines. Dr. Min is director of the Electron Microscopy Laboratory and Dr. Song is chief pathologist.

THE IOWA MEDICAL FOUNDATION HAS DESIGNATED THIS ARTICLE AS THE HENRY ALBERT
SCIENTIFIC PRESENTATION FOR THE MONTH OF AUGUST 1982

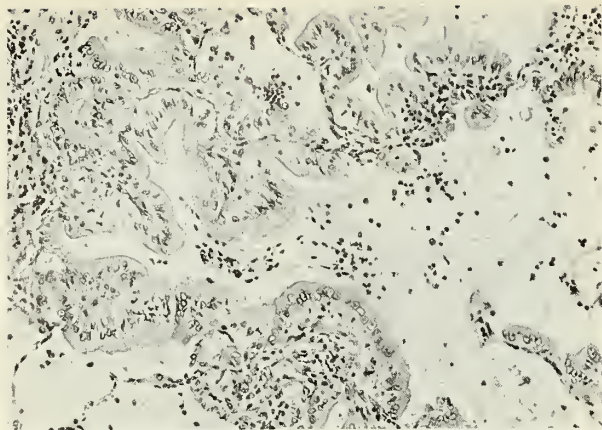


Figure 1. A photomicrograph showing mucin-producing columnar cells lining the alveolar septa typical of bronchioloalveolar cell carcinoma. Hematoxylin-eosin $\times 150$.

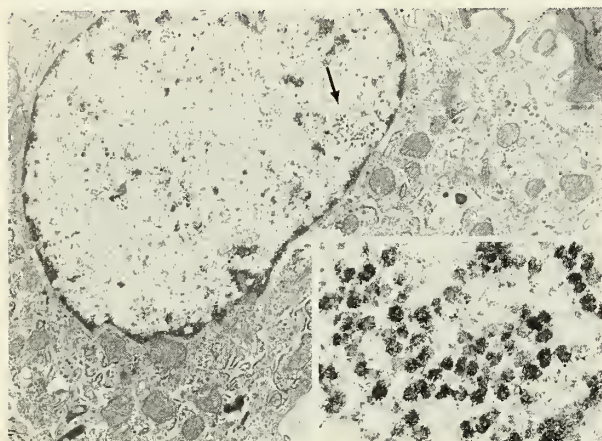


Figure 2. An electron micrograph of a bronchioloalveolar cell containing a cluster of virus-like particles (arrow) in the nuclei. They resembled papovavirus found in human laryngeal papillomas (inset). $\times 1500$ inset $\times 95,000$.

CASE REPORT

A 62-year-old female was admitted to Mercy Hospital Medical Center with an ill-defined mass in the apex of the right lung, found on routine chest X-ray. She admitted to coughing the past several months and acknowledged past problems with bronchitis. She had a history of 50-pack years of smoking. She had been treated for hypertension for the last 30 years with Aldomet and Diazide. The family history was not contributory.

Physical examination on admission revealed a well-developed and well-nourished female in no acute distress. No contributory findings were noted. Laboratory data included CBC, urinalysis and SMA-12. X-ray examination of the chest revealed an ill-defined density in the right apical area. Under general anesthesia, a

right upper lobectomy was carried out. Post-operatively, the patient did well and no evidence of recurrence was noted one year after surgery.

PATHOLOGY

There was a diffuse area of pneumonic consolidation throughout the major portion of the resected right upper lobe of the lung. On cut sectioning, the surface exhibited an appearance of gray hepatization. Microscopically, the consolidation was due to marked proliferation of columnar cells along the existing alveolar septa (Figure 1). The columnar cells had slightly atypical hyperchromatic nuclei and produced a profuse amount of mucin which filled the air spaces. Occasional alveolar septa were thickened diffusely and contained a moderate amount of lymphocytes. There was no evidence of metastasis in the peribronchial lymph nodes.

For electron microscopy, a small portion of fresh tumor tissue was fixed in 2.5% buffered glutaraldehyde and post-fixed with osmium tetroxide.

The tumor cells were columnar in shape, resting on a fairly well-defined basal lamina. The nuclei were pleomorphic, having frequent deep invaginations of nuclear envelopes. The invaginations contained portions of cytoplasm and its organelles, some of which appeared as stacks of tubuloreticular membranous profiles. In addition, in a small number of tumor cells, there were aggregates of electron-dense round particles measuring from 43 to 53 nm in diameter. The particles appeared as electron dense with smooth margins (Figure 2). No similar particles were observed in the cytoplasm. Other ultrastructural features were similar to those previously reported, including moderately prominent mitochondria, profiles of rough-surfaced endoplasmic reticulum, frequent Golgi apparatus associated vesicles, occasional cytoplasmic inclusions with myelin figures, tonofilaments with or without desmosomes, and occasional glycogen particles.

COMMENT

The nature of the intranuclear particles reported here is not known. Their general configuration and uniform size suggest they may be viral in origin. However, a possibility of their being perichromatin particles should be considered. There was a contrasting difference

from the usual perichromatin granules which varies markedly in size and contour. Furthermore, there is a morphologic similarity to papova virus found in human laryngeal papillomas.¹⁰

Although the true nature and significance of these particles remain unknown, this observation may indicate that future studies should

include papova virus as a candidate in the establishment of viral pathogenesis of bronchiolar-alveolar cell carcinomas, in view of well-known oncogenicity of papova group viruses.¹¹

REFERENCES

The references noted in this paper are available either from the authors or the JOURNAL OF THE IOWA MEDICAL SOCIETY.

ABOUT IOWA CITY VA CENTER

In the *Directory of Clinical Services at the University of Iowa*, which was published in the April issue of the JOURNAL, some information on the Iowa City Veterans Administration Medical Center was omitted because of space limitations.

As was noted in the directory, the VA Medical Center is closely affiliated with each of the University's health science colleges and provides short-term acute care primarily for general medical, surgical, and psychiatric pa-

tients. This 327-bed tertiary care center consists of 125 medical, 138 surgical, 18 neurological, and 46 psychiatric beds. Through its strong affiliation with the U. of I., the medical resources within the complex are shared.

A number of U. of I. Health Center facilities are based at the VA Medical Center, including laboratories for the transplantation program, highly specialized laboratories in nuclear medicine, and special units for the study of metabolic and gastrointestinal diseases. The VA Medical Center offers special training opportunities in clinical pharmacology, gastroenterology, cardiology, nephrology and applied immunology.

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The Abnormally 'Normal' UGI Series

JAMES A. PETERSON, Jr., M.D.
Clinton, Iowa

CONTRAST RADIOGRAPHIC STUDIES have been invaluable in the diagnosis of many diseases, but they are not infallible. This is especially true when attempts are made to extract more information than technology will allow. An upper gastrointestinal series that reveals an ulcer or a tumor speaks for itself, but a "normal" UGI series, accepted without question, may actually be misleading. When such a result is obtained in a patient with symptoms suggestive of either hyperacidity or delayed gastric emptying, we believe fiberoptic gastroscopy is indicated. The following examples illustrate this point.

CASE EXAMPLES

Case 1 — A 65-year-old woman with a long history of ulcer-like symptoms presented with a 4-week episode of a substernal burning pain that responded promptly to empirical Tagamet® therapy. She then returned with typical biliary symptoms plus mild hematemesis. Oral cholecystography (OCG) showed cholelithiasis, and an UGI series was normal. Prior to cholecystectomy, gastroscopy showed diffuse antral gastritis, plus an edematous, inflamed pylorus.

Case 2 — A 35-year-old woman presented with biliary colic but no jaundice. OCG

Attention is called to numerous cases in which significant pathology in the stomach and duodenum has gone undetected by standard UGI series. In patients appropriately selected for suggestive symptoms, the author has found fiberoptic gastroscopy invaluable for assessment purposes.

showed calculi and the UGI series was completely negative. The patient, however, also reported significant symptoms consistent with a hiatal hernia, although none was present radiographically. Preoperative gastroscopy revealed a severe duodenitis and gastritis with prominent edema of the pylorus. There was no bile reflux.

Case 3 — A 75-year-old man was treated for acute lower GI bleeding from diverticulosis. To complete the workup, an UGI series was performed and was negative. Gastroscopy showed an asymptomatic acute antral gastric ulcer which was not responsible for any bleeding.

Case 4 — A 42-year-old man with active ulcerative colitis had many longstanding symptoms of ulcer disease but repeated UGI series were normal. Because his future tolerance for the medications needed to control his primary disease depended upon normal gastric function, we recommended endoscopy. The exam showed diffuse antral gastritis and pyloric stenosis secondary to acute inflammation and edema.

Case 5 — A 43-year-old woman was admitted for treatment of severe mid-epigastric pain of 3 days duration. Her physical examination

Dr. Peterson is in the private practice of surgery with Medical Associates Clinic in Clinton, Iowa.

showed distinct mid-epigastric tenderness which later shifted to the RUQ. She was afebrile, her white cell count was normal, and the tenderness quickly subsided. Two years earlier she had 2 episodes of hemorrhagic gastritis but endoscopy failed to define a cause. OCG produced nonvisualization of the gall bladder and sonography was inconclusive; the UGI series was negative. Preoperative gastroscopy showed severe bile reflux gastritis and esophagitis. She successfully underwent cholecystectomy for an acutely inflamed gall bladder and responded well postoperatively to cholestyramine which was discontinued uneventfully one month later.

Case 6 — A 44-year-old woman presented with typical biliary symptoms and a long history of dysphagia. OCG was positive for calculi and chronic cholecystitis was later confirmed histologically. However, no one had noted that her "normal" UGI series was obtained on the *second* attempt because, despite a 12-hour fast, her stomach had been full of food on the first exam. The esophagus was not of the usual configuration although radiographically it was within acceptable limits. Preoperative gastroscopy revealed 1) the patulous esophagus of achalasia; 2) a true hiatal hernia, and 3) pyloric stenosis from active inflammation and edema plus asymmetric deformity from previous episodes of inflammatory disease.

COMMENT

We have encountered numerous other cases in which the UGI series simply did not reveal the pathology that was present, including one patient in whom an actively bleeding 5 mm duodenal ulcer was not detected. We believe the quality of the films involved would compare favorably with those of any other institution. What has created the problem in part is the growing reliance on the X-ray *reports* without looking at the films as well. In addition, there may be a tendency to rely upon the radiologist to make the diagnosis, ostensibly saving time in practice that would otherwise be "lost" in taking a more thorough history. It is therefore incumbent upon the consulting specialist to review all films personally. Consultation with the radiologist is valuable, but he cannot interpret clinical parameters or extrapolate beyond what the techniques available to him will allow.

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At times one must question whether the primary diagnosis is the *only* diagnosis. Does hematemesis reflect cholecystitis? Is biliary disease the only cause for retained food in the stomach? From another tack, is it not easier to return a patient to a normal diet if the stomach is not inflamed? And if the pylorus has a normal caliber and contractility? And then is it not embarrassing to have the patient report that he has the same symptoms postoperatively as he had preoperatively? And anyone who does not appreciate the threat posed by an undiagnosed peptic ulcer in a patient undergoing operation has never seen one hemorrhage postoperatively.

Fiberoptic gastroscopy permits precision in diagnosis that exceeds anything attainable before its introduction. Careful attention to the patient history will assure a discerning patient selection, and thus there should be few, if any, negative examinations.

And, in the end, is it not the patient who will benefit?

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Emergency Coronary Reperfusion for Evolving Myocardial Infarction

L. A. IANNONE, M.D.,
T. M. BROWN, M.D.,
W. J. WICKEMEYER, M.D., and
D. F. GORDON, M.D.

Des Moines, Iowa

BETWEEN 1975 and 1982, 317 patients had emergency coronary artery reperfusion for evolving myocardial infarction. The patients were divided into 3 groups depending on their cardiac catheterization findings and coronary anatomy. All patients with early evolving myocardial infarction underwent emergency coronary angiography and appropriate hemodynamic measurements with no mortality.

Group I consisted of 181 patients who underwent emergency coronary artery revascularization. Group II consisted of 111 patients who had coronary artery reperfusion with intracoronary streptokinase. Group III consisted of 25 patients who had reperfusion of the coronary artery and a combination of intracoronary streptokinase and subsequent percutaneous transluminal coronary angioplasty. Twenty-two Group II patients and one Group III patient required emergency coronary artery saphenous vein bypass grafting as streptokinase and percutaneous transluminal coronary angioplasty were unsuccessful. A significant residual stenosis remained in the MI vessel

This short discussion reports on the good morbidity and mortality among more than 300 patients treated by coronary artery reperfusion for evolving myocardial infarction.

leaving a significant amount of myocardium at risk.

The 181 Group I patients that underwent emergency coronary revascularization had thrombectomy in 79% of the MI arteries and 17% of these vessels had no observable lesion on restudy. There were 6 early (3.8%) and 2 late deaths (1.3%) in this group. Patients in Group II and Group III had no deaths and a very unremarkable convalescence. We conclude that patients with evolving myocardial infarction should have an emergency coronary angiography with the objective of reperfusion of the MI vessel via one of the above mentioned techniques.

With single vessel involvement, streptokinase lysis of the intercoronary thrombosis should be done. If this is successful and there is a significant residual stenotic lesion it should then have percutaneous transluminal coronary angioplasty. If the angioplasty is unsuccessful and a significant volume of myocardium remains at risk, then emergency saphenous vein bypass grafting should be carried out. With patients with early evolving myocardial infarction who demonstrate multiple vessel disease in addition to the MI artery involved should have emergency saphenous vein bypass grafting as a treatment of choice.

The authors are in the private practice of cardiology in Des Moines, Iowa.



COMMENTING EDITORIALY

MARION E. ALBERTS, M.D.
SCIENTIFIC EDITOR

THE REALITY OF EXPERIENCE

IN THE PAST MONTH we have welcomed into our hospitals young physicians who are starting a new phase of their professional lives. The larger, teaching hospitals are receiving a new class of resident physicians, and in other places, young physicians are commencing their first private practices.

It is appropriate for the term "commencement" to be used. It denotes the graduation of the student from academic studies. It is then that a new life begins; there is a casting off of the old and a beginning of a new and different aspect of life's experiences.

Paracelsus (1493-1541) observed that "the art of medicine cannot be inherited, nor can it be copied from books." This is a reality that only experience can demonstrate in a significant manner. Academic medicine, with its learning processes, i.e., listening to lectures, reading books, etc., is far from the actual performance of tasks which comprise care of the ill and distraught. Various writers of the past have referred to experience as *the mother of Truth* (William Shippen, Jr., 1736-1808); *the mother of Science* (Cervantes, 1547-1616); while Disraeli (1804-1881) looked upon experience as *the child of Thought, and Thought as the child of Action*.

The reality of experience has been propounded by Disraeli. By action there must be thought, and the ultimate result becomes experience. The capacity for experience paves the way to wisdom; however, experience alone is not enough. It develops the arch upon which

the entire makeup of livelihood must be built. Medical students and resident physicians spend untold hours delving into books and medical journals. Yet a wealth of experience lies a short walk away — in the hospital wards. The art of medicine is not in the books; it comes through the experience of the eyes, the ears and the hands while with the patient. As the patient relates his problems, and we carefully observe the effects thereof, the art of medicine evolves. There is time later to learn from the books and lecturers what we cannot understand.

The greatest physicians of all time were "hands-on" practitioners. They listened to the ill person, observed his characteristics, examined him thoroughly (re-examining, if necessary) to establish the diagnosis. Values are derived not only from seeing much, but in seeing wisely. Osler stated it succinctly: "Let not your conceptions of the manifestations of disease come from words heard in the lecture room or read from a book. See, and then reason, compare and control. But, see first. No two eyes see the same thing. Let the word be

"The art of medicine is not in the books; it comes through the experience of the eyes, the ears and the hands while with the patient."

your slave, and not your master. Live in the ward."

The profession we practice is unique in that we deal with life; medicine is only one facet of life.

May every young physician profit from each experience whether just entering a residency training program or embarking upon the practice of medicine. Serve the ill and those who seek help for their infirmities, as well as those who desire aid in leading a healthful life. Learn from the daily experiences of your communion with people. Have a humble and compassionate attitude toward those who seek your professional skills. Experience is reality, and there surely is reality in experience.

"Nothing is so difficult to deal with as man's own Experience, to value it, according to its amount, what to conclude from it, and how to use it and do good with it." PETER MERE LATHAM (1789-1875) *General Remarks on the Practice of Medicine, Chapter XIII.* — M.E.A.

A Point of View

WHAT LURKS IN THE WOODS? UTILIZATION REVIEW, THAT'S WHAT!

IN MAY, 1981, the IMS House of Delegates passed a resolution against federally funded review organizations, but supported voluntary review. I think the meaning of the resolution was that Iowa physicians wanted the Federal Government out of review and asked for a locally run program. I don't believe that any review program can really be called voluntary. I think that if physicians had a choice between "no review" and "review," "no review" would win 2 to 1. I think that physicians feel coerced into having any review at all, but a locally controlled program could be called "voluntary" and more easily manipulated.

Let's not kid ourselves. The days are gone when the answer to "why?" was, "I'm the doctor and I said so, that's why." Our patients expect us to be accountable — so does the government and so do insurance carriers. So what's with review, voluntary or otherwise? Do good records mean good patient care? Do good progress notes mean good doctoring? Does documentation really show that we are

responsible and accountable physicians? Does he who writes well, treat well?

These are fair and reasonable questions, and must be answered. Over the past several years, studies have been done to try to correlate the adequacy of record keeping with the quality of medical care. A majority of these studies indicate that there is a positive relationship between good records and good care. There is some good in keeping an up-to-date, accurate account of a patient's progress while in the hospital. After all, a hospital is an *acute* care facility and if the care the patient is getting is acute, it should be documented. If the care is not acute, documentation is not vital, and the patient should be at a different level of care.

But I have strayed. Is it really voluntary, this utilization review? No! — it is far from voluntary. It is a coerced, uneasy cooperation — something like having to take the cod liver oil when we were kids. It was good for us, but we didn't think so. Well, I think we may feel the same about review. We don't like it but we'll take it because it will be good for us and our patients. If we're wrong, we get to shred our progress notes.

Is it voluntary? No. Who cares? We all do, I guess. Do you? — DENNIS J. WALTER, M.D., *Des Moines*.

QUESTIONS/ANSWERS

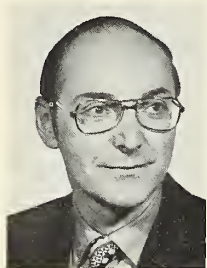
(Continued from page 317)

the complexity of the interaction between market forces and regulatory principles as they impact upon health care delivery and its costs, participate actively in the massive educational process necessary for both providers and consumers.

What, personally, do you see as our greatest need in Iowa over the next 10 years in the delivery of quality health care?

In analyzing Iowa's greatest need in this area for the next 10 years, I would recommend commitment to a long-range strategy for continued delivery of quality health care at a lower rate of

costs which are affordable to all Iowans. For example, since health care costs represented 4.4% of the GNP in 1955, now exceed 10% of the GNP, and are projected to 12% by 1990, it is tempting to adopt short-range, quick-fix strategies *only* to cope with the escalating costs. Costs for the next 3-4 years are likely to continue at approximately the present (higher than national rate) Iowa rates because the health industry already contains the cost factors in the system. Short-range strategies (e.g., appropriate expanded ambulatory care, alteration of current Blue Cross reimbursement formula, at least 2 options for every insured employee, development and implementation of experimental hospital and physician payment programs) must be undertaken in the next and successive years; and commitment is needed by all sectors of the health care industry to emphasize positive and healthy life styles by and for Iowans.



OUR MAN ON EDUCATION

RICHARD M. CAPLAN, M.D.

A PREDATION-BASED CME COURSE

IF YOU THINK you live in a dog-eat-dog world, you're right. Or at least, it's a something-eat-something-else world. It would be possible to use the theme, predation, as the basis for a remarkably comprehensive CME course — comprehensive, even if unconventional.

Most people, asked to think of ways in which predation causes illness, would think of the large category we call infection and grant it much time. Infection suggests very small organisms preying (just living, that's all) on larger ones. Viruses, rickettsiae, bacteria, protozoans (like ameba, malaria, giardia) — they come easily to mind. When the organisms are larger or biologically more complex like flukes, tapeworms and scabies mites, we change the verb from infect to infest.

What, though, do we call it when harm comes from the anger or defensive behavior of another species (such as a matador gored by a bull or that behavior illustrated by a bee sting, cobra bite, lion mauling, elephant stampede)? What categorical verb includes one's being "eaten alive," which conveys (for a reason not clear when one stops to think about it) an end more horrible or macabre than that caused by innumerable bacteria triumphant during lethal septicemia. Those injuries from larger animals seem unlikely, perhaps, compared to the risks

of bacterial pneumonia. And yet, consider one of our largest and nearest predators — man. Oh, you complain, man rarely destroys other men for food, whereas if *Klebsiella* takes up housekeeping in one's blood stream, it's not done out of a spirit of malevolence. We humans can prey upon one another not simply through our gastrointestinal apparatus, as in cannibalism, but our minds can manipulate circumstances (of people as individuals, or groups as societies) and thus "prey" upon others.

In times now largely vanished, consumption referred to the ill effects produced by huge replication of tubercle bacilli. Since that happens so little anymore in the world near us, what instead consumes us? Abstractions, that's what — anger, guilt, anxiety, depression, jealousy, revenge, lust for sex, lust for power. Mainly the last of these, in its myriad faces, causes man to inflict psychic and physical harm on his fellow creatures. And doesn't man find clever ways to do it — not even counting the "outmoded" methods like crucifixion, the iron maiden, the flaming catapult.

"A predation-based course could force us to learn not only about our bodies and its subdivisions (such as organs, cells, molecules and subatomic particles) but also about the larger or supraorganismic mesh (family, community, civilization, and ecologic environment)."

Either wittingly or unwittingly, we can employ automobiles, noxious chemicals released into the environment, inequities in the legal system, refusal to speak, Saturday night specials, nuclear bombs. But even more, consider our capacity to create and manipulate emotions — the entertainment and advertising and counselling industries depend on it. In many ways the medical profession does, too. At least, we do if we are being effective.

Of course, study of those disturbances that arise from trauma, malnutrition, or congenital anomaly of a structure or enzyme would be reserved to other CME courses. Yet even these often have interconnections with man's social and cultural activities. If we built a CME course dealing with the range of predation just sug-

(Please turn to page 336)

Dr. Caplan is Associate Dean for Continuing Medical Education at The University of Iowa College of Medicine.

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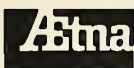
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DRUG THERAPY REVIEW



UNIVERSITY OF IOWA HOSPITALS AND CLINICS

REYNOLD SPECTOR, M.D., Editor

CUTANEOUS DRUG REACTIONS

CUTANEOUS DRUG REACTIONS are a common clinical problem. They are important because of their influence on subsequent drug therapy, their prolongation of hospital stays, their morbidity and occasional mortality, and because they are frequently iatrogenically produced. The epidemiology and approach to cutaneous eruptions resulting from systemically administered drugs will be reviewed.

Two percent of all hospitalized patients develop a drug eruption during hospitalization.¹ Since the average inpatient receives 8 different medications, the incidence is 3 eruptions per 1,000 courses of drug therapy.¹

The most important factor predisposing to cutaneous drug reactions is the drug administered. Age, sex, diagnosis, admission BUN, and severity of underlying disease are of far less clinical importance. The Boston Collaborative Drug Surveillance Program, by monitoring 22,000 consecutive medical inpatients, established the frequency with which certain drugs produce reactions. Table 1 shows reactions produced in more than 1 percent of recipients.^{1, 2}

This information for Iowa physicians is furnished and sponsored by the University of Iowa Hospitals and Clinics.

The antibiotics and blood products produced two-thirds of all eruptions. Nearly one-half (46%) were caused by penicillins.

While some drugs frequently produce eruptions, others do so rarely. Potassium chloride, digoxin, aluminum and magnesium hydroxide, dioctyl sodium sulfosuccinate, atropine, diphenhydramine, and bisacodyl were not associated with skin reactions.^{1, 2} Chloral hydrate produced one skin reaction in more than 8,000 recipients.^{1, 2}

The morphology of cutaneous drug reactions is variable. However, 90 percent of all cutaneous reactions fall into 4 readily distinguishable categories: exanthematous, urticarial, fixed, and vesiculobullous.^{3, 4} Almost all drug eruptions fall within 10 morphologic categories, with the relative frequency shown in Table II.^{3, 4}

EXANTHEMATOUS ERUPTIONS

Exanthematous eruptions are the most frequent cutaneous syndrome produced by drugs.^{3, 4} These eruptions are characterized by symmetrically distributed, blanching, erythematous macules and papules, usually beginning on the upper torso and over areas of pressure or trauma. Mild elevations of temperature can occur and may be the first manifestation of the eruption. Involvement of palms, soles, and mucous membranes varies. A drug etiology can never be concluded from the morphology and distribution of the exanthem alone. The differential diagnosis may include

TABLE 1
CUTANEOUS DRUG REACTIONS

Drug	No. of		
	Cutaneous Reactions	No. of Recipients	Reactions per 1,000 Courses
Trimethaprim-Sulfamethaxazole	10	169	59
Ampicillin	156	2,988	52
Semisynthetic Penicillins	27	760	36
Blood, whole	32	908	35
Platelets	4	145	28
Corticotropin	3	106	28
Erythramycin	11	481	23
Sulfisoxazole	8	462	17
Penicillin G	51	3,286	16
Gentomycin	10	607	16
Cephalosporins	17	1,308	13
Plasma Protein Fraction	3	245	12
Quinidine	8	652	12
Dipyrene	10	876	11

viral infections, bacterial and rickettsial infections (scarlet fever, typhoid fever, typhus, secondary syphilis, and early Rocky Mountain spotted fever), systemic lupus erythematosus, dermatomyositis, pityriasis rosea, early erythema multiforme, and exfoliative dermatitis.

Sulfonamides, ampicillin, and penicillin are the drugs most frequently implicated in exanthematous eruptions.^{3, 4} Many other drugs are occasionally implicated.⁴

Although most drug exanthems are assumed to be allergic, mechanisms have not been established. However, exanthems from ampicillin are usually not allergic.⁵ Most patients with infectious mononucleosis and about one-fourth of those taking allopurinol develop a maculopapular eruption when given ampicillin.⁵ Patients with cytomegalovirus infection and chronic lymphatic leukemia may also be at increased risk of developing an ampicillin eruption.⁵

URTICARIA

Acute urticarial reactions are the second most common form of cutaneous drug reaction.^{3, 4} The major causes of drug-induced urticaria are penicillins, sulfonamides, salicylates, and iodinated contrast media. Urticaria is the most common manifestation of penicillin allergy.^{3, 4} Urticaria occurring within 48 hours after starting penicillin implies the presence of skin sensitizing antibodies (IgE) and the capacity for subsequent Type I hypersensitivity reactions on readministration. Urticaria occurring 4 to 14 days after starting penicillin may be manifestation of serum sickness, representing a Type III antigen-antibody reaction. Whether urticaria following sulfonamide administration represents similar mechanisms is uncertain.

Urticaria secondary to salicylates is dose related, varies from time to time in the same patient, and frequently occurs after administration of other structurally dissimilar prostaglandin synthetase inhibitors.⁶ Although usually not an allergic reaction, aspirin-induced urticaria may rarely be IgE mediated. Aspirin intolerance is especially frequent (20-30%) in patients with chronic urticaria. Chronic urticaria is rarely caused by drugs, but may be exacerbated by salicylates.

VESICULOBULLOUS ERUPTIONS

The drug-induced vesiculobullous eruptions comprise 3 overlapping entities: erythema multiforme, Stevens-Johnson syndrome, and

TABLE II
DRUG REACTION BY MORPHOLOGIC CATEGORY

	Relative Frequency
Exanthematous (maculopopular) Eruption	45.7
Urticario	25.2
Fixed Drug Eruption	9.7
Vesiculabullous Eruptions	11.4
Erythema Multiforme	(4.9)
Stevens-Johnsan Syndrome	(3.1)
Toxic Epidermol Necralysis	(3.4)
Photosensitivity Eruption	2.7
Exfoliative Dermatitis (Erythroderma)	2.6
Nodular Eruptions (Erythemo Nodosum)	0.4
Purpuric Eruptions (Vasculitis/Coogulopathy)	1.6
Eczematous Eruption (Rare)	0.7
Licinoid Eruption (Rore)	

toxic epidermal necrolysis. Erythema multiforme is characterized by the classic target lesion with a tendency to involve the hands, feet, and mucous membranes, but urticarial and vesiculobullous lesions are common. Stevens-Johnson syndrome is a more severe form of erythema multiforme with prominent mucosal involvement and systemic symptoms. Drug-induced toxic epidermal necrolysis is a severe generalized bullous eruption of the skin and mucous membranes. Fever, malaise, and target lesions may be present. In all drug-induced vesiculobullous eruptions, skin separation tends to occur at the dermal-epidermal junction. Mortality from Stevens-Johnson syndrome is about 15 percent,⁷ while that for toxic epidermal necrolysis ranges from 30 to 50 percent.⁸ Morbidity in both syndromes results primarily from ocular mucosal involvement with residual scarring.

Drugs are occasionally associated with erythema multiforme but more frequently with Stevens-Johnson syndrome (35 to 85%)⁷ and toxic epidermal necrolysis (37%).⁸ Antibiotics are frequently given for symptoms that may have represented the prodrome of Stevens-Johnson syndrome itself,⁷ so it is often unclear whether such antibiotics are pathogenetically related. The drugs most frequently associated with Stevens-Johnson syndrome and toxic epidermal necrolysis are sulfonamides.^{3, 4, 7, 8} Both syndromes are also associated with other antibiotics, barbiturates, and diphenylhydantoin. Toxic epidermal necrolysis is further associated with allopurinol, phenylbutazone, and oxyphenbutazone. (Please turn to page 332)

The fixed drug eruption consists of one or more sharply demarcated oval lesions of deep erythematous to violaceous hue that tend to recur at the same anatomic site — usually the extremities or oral mucosa — each time the offending drug is given. It is pathognomonic for a drug etiology. Phenolphthalein, barbiturates, oxyphenbutazone, tetracycline, chlor-diazepoxide, sulfonamides, and aspirin are frequently implicated.^{3, 4}

DIAGNOSIS

Differential diagnosis should proceed along 2 independent pathways: a morphological description of the particular eruption with a knowledge of its potential causes and a list of the types of reactions the patient's medications are capable of producing. The diagnosis is usually based on clinical evidence: an eruption in a patient receiving a drug capable of producing that eruption, which resolves on discontinuation of the drug. There are 3 tests that under limited circumstances may be helpful in confirming the diagnosis: the skin biopsy, the skin test, and oral rechallenge.

The skin biopsy is helpful in confirming the morphology of the eruption, thereby aiding an appropriate differential diagnosis. It can never prove that a drug caused an eruption. Biopsy of early lesions with immunofluorescent studies is helpful in vesiculobullous eruptions and in those circumstances where vasculitis is possible, specifically in cases of palpable purpura and urticarial lesions that persist in the same location for more than 24 hours. The biopsy is often helpful in exfoliative dermatitis to eliminate the possibility of an underlying dermatosis causing the eruption. It should be utilized whenever the morphological category of the eruption is unclear or the clinical course is atypical.

Penicillin skin testing is currently used only in patients with a history of penicillin allergy who are about to receive penicillin because there is no satisfactory second line therapy to treat their infection. Although Levine has advocated penicillin skin testing for diagnostic confirmation of a penicillin etiology in urticarial reactions where penicillin is one of several suspected drugs,⁹ such use of the penicillin skin test is controversial and not generally accepted. Skin testing is not helpful in deciding whether an exanthematous eruption was

penicillin induced, since patients with a history of penicillin-induced exanthems do not have an increased incidence of positive skin tests over the normal population.¹⁰

Serial rechallenge is occasionally used to establish which of multiple drugs caused an eruption.³ Such rechallenges are justified only when the need for the therapeutic agent is great, the preceding eruption was minor, and adequate precautions are taken to handle anaphylaxis. Rechallenge is not justified when the preceding rash was life threatening, for example, exfoliative dermatitis, Stevens-Johnson syndrome, toxic epidermal necrolysis, and some cases of urticaria. In the case of penicillins and cephalosporins, rechallenge is never justified without prior penicillin skin testing to penicilloyl-polylysine (PPL) and penicillin G. Should rechallenge be warranted, the order in which drugs are reinstituted should take into account 2 factors: the known relative tendencies of the suspected drugs to produce an eruption (*supra*) and the temporal relationship of the rash to recently started drugs. Most drug reactions occur within the first 2 weeks of therapy.¹ Should a patient be on several medications, one chronically and the other recently started, the latter is more likely the offending agent. Rechallenge should be done with the former. One protocol for rechallenge in hospitalized patients employed small oral doses gradually increasing every 24 hours.³ One-tenth, one-fourth, and one-half of the therapeutic dose was given on days 1 through 3 respectively and the full dose on day 4. More than 90 percent of positive reactions consisted of an eruption occurring within 24 hours of the precipitating dose.³ Fever and pruritus composed the remaining positive reactions.

TREATMENT

When presented with a patient whose eruption is potentially drug induced, all drugs must be stopped with 2 exceptions: those considered essential for the patient's care for which there exists no satisfactory alternative and those believed to be free of cutaneous eruptions (*supra*). Most drugs essential for the patient's management have acceptable, structurally dissimilar alternatives available. Therapeutic substitution is the standard method of rendering essential care to a patient with a potentially drug-induced eruption. Only rarely is the risk of a second line therapy greater than the risk of

a severe dermatitis, for example, in penicillin allergic patients with endocarditis. In these rare circumstances, continuation of therapy may be justified, but close observation for progression of the eruption is essential. Steroids and antihistamines are used to ameliorate symptoms and prevent progression, but there is no evidence they improve outcome.

Next to stopping implicated drugs, treatment of cutaneous drug reactions consists of supportive therapy, steroids in limited circumstances, and informing the patient of the implications of the eruption. Supportive therapy is most important in those eruptions that significantly affect the epithelial barrier, specifically Stevens-Johnson syndrome, toxic epidermal necrolysis, and exfoliative dermatitis. Patients with extensive sloughing from toxic epidermal necrolysis may be best managed in a burn unit. In these life-threatening dermatoses, systemic steroids are often employed, but there are no controlled trials establishing their effectiveness.

Finally, patients must be informed of the significance of their drug reaction. Twenty-five percent of patients who die of penicillin

anaphylaxis had a prior reaction to penicillin.¹¹ Being sure patients sufficiently understand the nature of the eruption to protect themselves from future treatment with the same medication is perhaps the most important step in reducing the incidence of preventable anaphylaxis. — Robert J. Hegeman, M.D., Associate in Medicine and Surgery

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MATERNAL & CHILD HEALTH PROGRAM

THE ULTIMATE GOALS of maternal and child health programming are to assure that each pregnancy occurs in a woman who desires and prepares herself for that pregnancy; and that she has available and uses the health, social, and educational resources necessary to ensure a healthy outcome. It further assures that the child has a continuum of health service to support orderly growth and development toward its inherent potential. Such care will identify early, and refer for diagnosis and therapy, any potential condition which may prevent that child from reaching its potential. The role of the Maternal & Child Health Section of the State Department of Health is to encourage and assist the development of services which are necessary to meet Iowa needs, with special emphasis on the population presently unserved. The Maternal & Child Health Section will assist each community to develop an organizational structure to fulfill this mission.

CHILD HEALTH CENTERS

The purpose of the 11 child health centers in Iowa, which serve children in 27 counties, is to assure comprehensive health services, especially preventive, for children under 21 years of age. Great emphasis is placed on providing service to children 0-6 years of age who are not

receiving care. There are approximately 153,346 low-income Iowa children and adolescents in the age range of 0-17 years of age who may be in need of additional health care. The child health centers are located in Mason City, Bedford, Dubuque, Newton, Waterloo, Fort Dodge, Ames, Williamsburg, Davenport, Muscatine and Carroll, with clinics in 9 surrounding counties.

Approximately 10,139 children and adolescents received services through these child health centers in 1981. They are administered by the Maternal & Child Health Section of the Iowa State Department of Health. This number represents only 7.1% of the low-income children and youth in the state. Primary funding for child health programs is supplied by the federal Department of Health & Human Services through the Maternal & Child Health Services Block Grant.

Services available at child health centers include health appraisal through physical assessment and history, immunizations, assessment of growth and development, anticipatory guidance for physical and mental develop-

"The role of the Maternal and Child Health Section of the State Department of Health is to encourage and assist the development of services which are necessary to meet Iowa needs, with special emphasis on the population presently unserved."

ment, nutritional, social, and dental guidance and referrals to appropriate providers.

Understanding orders of physicians, the pediatric nurse practitioners do physical assessments. Referrals are made to private physicians, dentists, community mental health centers, social workers, Area Educational Agencies, the Special Supplemental Food Program for Women, Infants, & Children (WIC), Specialized Child Health Services, Regional Genetic Consultation Services, public health nurses, etc., in order to provide comprehensive health care.

Children served by the program had immunization levels of 92% at 2 years of age, and 86% at 6 years of age. These levels are based on current standards of the American Academy of Pediatrics. In addition, there was a total of 1,527 referrals, including 790 medical, 334 den-

This information on public health matters is furnished and sponsored by the Iowa State Department of Health.

tal, 165 ophthalmological, and 96 for developmental assessment.

Casefinding and outreach are provided directly or furnished by other community agencies. Transportation is either provided or arranged for clients who do not have a means of transportation. Referral and followup are essential components to assure comprehensive health care.

Funds are unavailable for additional child health centers. With new sources of money, it will be possible to expand into counties where the health care needs are greatest for children and youth. Community acceptance of preventive health care can also be a barrier. Availability of pediatric nurse practitioners may also be a problem in some sparsely populated areas of the state.

MATERNAL HEALTH CENTERS

The 6 maternal health centers serve residents of 28 counties. Their goals are quality prenatal care, delivery of a healthy baby, and continued good health of the mother. Comprehensive health care, especially preventive, for women ages 15 through 44 is extremely important. Optimal prenatal health care includes beginning care during the first trimester of pregnancy. These centers are located in Ottumwa, Clinton, Mason City, Davenport, Muscatine, and Waterloo.

During 1981, 2,404 women were served by the program, and 73% received 8 visits or more during their pregnancies. Of the women served, 52% had less than 12 years of school (14.7% for state); 46% were unmarried (10.3% for state); 16% were under 18 years of age (3.8% for state); 4.4% had an infant who was of low-birth weight as compared to 5.4% for state; and overall perinatal mortality for this high-risk group was less than the rate for high-risk women.

In the maternal health centers, a patient will receive the following services: prenatal care and education; dental health education; nutrition counseling, referral, and followup; delivery either within the local community or at University Hospital in Iowa City; and postpartum care, including family planning services.

Casefinding and outreach are provided directly or furnished by other community agencies. Transportation is either provided or arranged for clients who do not have a means

of transportation. Referral and followup are essential components in order to assure comprehensive health care.

Residents from the Obstetrics/Gynecology Department of the University of Iowa Hospitals staff 4 of the centers, and private physicians and family practice residents provide the medical services in the other centers.

OTHER PUBLIC MATERNAL & CHILD HEALTH SERVICES

There are additional maternal health services which are supported locally in Des Moines, Cedar Rapids, Sioux City, and at the University of Iowa Hospitals in Iowa City. Also, there are child health services provided in Des Moines, Allison, Webster City, Eldora, Toledo, Cedar Rapids, and Iowa City.

Should more information be desired, please write to: *Maternal & Child Health Section, Iowa State Department of Health, Lucas Building, 3rd Floor, Des Moines, IA 50319.*

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June 1982 Morbidity Report

Disease	June 1982 Total	1982 to Date	1981 to Date	Most June Cases Reported From These Counties
Amebiasis	7	47	5	Boone
Brucellosis	0	1	0	
Chickenpox	392	5840	6908	Scattered
Campylobacter	35	115		Palk, Black Hawk
Cytomegalavirus	6	24	10	Jahnsen, Palk
Eaton's Agent infection	10	107	13	Jahnsen, Marshall, Palk
Encephalitis, viral	2	11	8	Benton, Mahaska
Erythema infectiosum	62	246	1145	Union
Gastroenteritis (GIV)	189	7915	12139	Scattered
Giardiasis	13	54	19	Palk, Sac, Sioux
Hepatitis, A	6	47	143	Scattered
Hepatitis, B	12	53	45	Palk, Johnson
Hepatitis, Non A-B	0	7		
Hepatitis type unspecified	4	16	30	Jahnsen, Cassuth, Mills
Herpes Simplex	38	180	98	Jahnsen, Palk, Black Hawk
Herpes Zoster	1	10	4	Jahnsen
Histoplasmosis	1	14	6	Jahnsen
Infectious mononucleosis	10	127	188	Linn
Influenza, lab confirmed	6	73	191	Scattered
Influenza-like illness (URI)	876	26676	48228	Scattered
Legionnaire's	3	16		Jahnsen
Meningitis				
aseptic	6	17	25	Clayton
bacterial	19	92	74	Butler, Wapella
meningococcal	0	5	18	Scattered
Mumps	2	29	40	Grundy, Palk
Pertussis	0	3	2	
Polio, Paralytic	1	1	0	Dubuque
Rabies in animals	42	208	480	Story, Jackson, Clayton
Rheumatic fever	0	3	6	
Rocky Mt. Spotted Fever	2	2		Muscatine, Scott
Rubella (German measles)	0	0	4	
Measles	0	0	1	
Salmonellosis	42	136	116	Black Hawk, Dubuque, Lynn
Shigellosis	0	21	17	
Toxic Shock Syndrome	1	8		Palk
Tuberculosis				
total ill	5	47	48	Jahnsen, Paweshiek
bact. pos.	5	36	31	Jahnsen, Paweshiek
Venereal diseases:				
Gonorrhea	351	2268	2405	Palk, Scott, Black Hawk
Syphilis	3	17	13	Marshall, Scott

Laboratory Virus Diagnosis Without Specified Clinical Syndrome: Haakworm — 4, Scott; Ascariasis — 1, Buchanan, 1, Clinton; Tetanus — 1, Palk; Trichuriasis — 3, Scott; Malaria — 1, Lee, 1, Palk; Clonorchis — 1, Palk, 1, Scott.

OUR MAN ON EDUCATION

(Continued from page 328)

gested, we would soon realize that medicine must pursue not just our conventional model of bioscience, but would expand to the biopsychosocial model elaborated by Engel (*Science*, 1977). Modern bioscience derives from a history of, and concern for, *body* and from the mechanistic, reductionistic philosophy that flourishes with it. *Mind* is now popularly understood not as an equal in a Cartesian mind-body dualism, but as a bodily function: neurochemistry. A predation-based course could invite us to learn not only about our bodies and its subdivisions (such as organs, cells, molecules and subatomic particles) but also about the larger or supraorganismic mesh (family, community, civilization, and ecologic environment). Not only do infection and infestation harm us; disturbances of abstractions, emotions, and macrocosmic behavior also cause pain, suffering and functional loss within individuals and groups. We in medicine should also address that more encompassing domain.

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Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, light-headedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, e.g., excitement, stimulation and hyperactivity.

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NEWS/PRODUCTS, PROGRAMS, ETC.

Information on various products, programs, etc., is received regularly by the IMS JOURNAL. Here are short items sifted from the mail by the Scientific Editor. A reference to a specific product is not intended to suggest any particular endorsement. Additional information on any entry may be obtained by contacting the IMS JOURNAL.

ONCE A DAY THERAPY — G. D. Searle & Co. has announced U.S. Food and Drug Administration approval to market Nitrodisc™, a new once-a-day nitrate transdermal therapy for the prevention and treatment of angina attacks. The patented product utilizes a novel delivery system to provide a continuous supply of nitroglycerin through the skin for at least 24 hours. Nitrodisc consists of nitroglycerin microsealed in a solid silicone polymer, which is bonded to a flexible adhesive pad. The product is placed daily on the chest or inner surface of the upper arm, and the drug is absorbed at a constant and controlled rate through the skin to help protect against angina attacks.

NEW NASAL INHALER — Schering Corporation recently released *Vancenase™* Nasal Inhaler, used to treat seasonal (hay fever) and perennial rhinitis. This prescription product, chemically known as beclomethasone dipropionate, is packaged in a metered-dose aerosol metal canister which produces 200 actuations (doses). *Vancenase* Nasal Inhaler is indicated for patients who respond poorly to conventional treatment. The package literature should be consulted for possible contraindications and adverse effect.

AEROSOL ON MARKET — Proventil®, a bronchodilator aerosol used to treat reversible obstructive airway disease, has been placed on the market by Schering Laboratories. The active ingredient, albuterol, is a beta₂-adrenergic

(Please turn to page 338)



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ABOUT IOWA PHYSICIANS

Dr. James R. Paulson, Grinnell, recently addressed the Grinnell Kiwanis Club. His topic "Super Health 2000." . . . **Dr. Stephen Smith** has joined **Dr. Donald Flory** in family practice in Indianola. Dr. Smith received the M.D. degree at the U. of I. College of Medicine and completed his family practice residency in Davenport. **Dr. William P. Garred**, Onawa, was guest speaker at a recent meeting of the Burgell Memorial Hospital Auxiliary. Dr. Garred discussed the menopause. . . . **Dr. David Clark** will join **Dr. Robert Haakenson** in the Forest City office of the Park Clinic in July. Dr. Clark received the M.D. degree at the U. of I.

NEWS/PRODUCTS, PROGRAMS, ETC.

(Continued from page 337)

which has been available for some time in Canada, The United Kingdom, Western Europe, Asia and South America. The microcrystalline suspension of albuterol is packaged in a metered dose aerosol unit for oral inhalation. Although a low incidence of adverse side effects have been reported, the prescribing physician should be fully aware of the product information statements.

NEW SUPPLEMENT — Griner, P. F., Mayewski, R. J., Mushlin, A. I., and Greenland, P., **SELECTION AND INTERPRETATION OF DIAGNOSTIC TESTS AND PROCEDURES: PRINCIPLES AND APPLICATIONS**, Ann. Int. Med. (Supplement), 94:557-600, 1981. This supplement covers the principles of diagnostic test selection. It examines the purposes and characteristics of diagnostic tests. The interpretation of tests is studied with predictive

College of Medicine and completed his family practice residency in Rockford, Illinois. He is currently completing a two-year contract with the National Health Service Corps in Eldorado Springs, Missouri.

New officers of the Iowa Thoracic Society are — **Dr. Greg Hicklin**, Des Moines, president; **Dr. George Caudill**, Des Moines, president-elect; and **Dr. Craig Bainbridge**, Sioux City, secretary-treasurer. . . . **Dr. J. G. McCarroll**, Fort Dodge, was guest speaker at a recent meeting of the Wright County Medical Society. Dr. McCarroll's topic "Facts and Fallacies in Ob-Gyn." . . . **Dr. Kenneth D. Dolan**, Iowa City, recently was elected president of the Iowa Radiological Society and **Dr. Dale Roberston**, Cedar Rapids, president-elect. . . . **Dr. J. R. Mincks**, Bloomfield, reported on a recent positive meeting of the Davis County Medical Society and the Davis County Ministerial Association. Physicians and clergy shared their ideas to improve physical, emotional and spiritual care among patients in the Davis County Hospital.

values noted, along with how factors other than disease may influence the tests. Finally, these principles are applied through diagnostic exercises to show what general diagnostic strategies are proposed. This manual will help (1) select tests and procedures in a cost-effective manner, and (2) make interpretations more efficiently.

FREE INFO ON DES — Publications available without charge from National Cancer Institute include information for the patient and the public: 1) Questions and answers about DES exposure during pregnancy and after birth; 2) Were you or your daughter or son born after 1940? And, for the physician: 1) Prenatal diethylstilbesterol (DES) exposure: recommendations of the DESAD project; 2) Atlas of findings in the human female after intrauterine exposure to diethylstilbesterol. Send requests to: Office of Cancer Communications, Department DES, Building 31, Room 10A19, National Cancer Institute, Bethesda, Maryland 20205.

Dr. Edward G. Nassif, Ames, recently received the American Lung Association of Iowa's Brophy Award for outstanding volunteer achievement. . . . **Dr. Sawat Phruttitum** recently began family practice at the Rural Health Clinic in Jesup. A native of Thailand, he received his medical education at Chiangmai University in Thailand; interned at St. Francis Hospital in Evanston, Illinois and served his surgery residency at Good Samaritan Hospital in Cincinnati, Ohio. He then returned to Thailand for 6 years. Upon his return to the United States in 1981, Dr. Phruttitum located in Sigourney, Iowa. . . . Three doctors will come to Bloomfield later this year. **Dr. Ron Myrom** will join the Gilfillan Clinic in July. Dr. Myrom received the M.D. degree at the University of Minnesota. His specialty is internal medicine. **Dr. Patrick Shu** will be in the private practice of obstetrics and gynecology. **Dr. Greg Bailey** will open a solo family practice. Dr. Shu and Dr. Bailey received their medical training in Toronto, Canada. . . . **Dr. Sulpico B. Uy** joined the Denison Primary Care Center in May. A native of the Philippines, Dr. Uy received the M.D. degree at Manila Central Uni-

versity College of Medicine and served a surgery residency at San Pedro Hospital in Davao City. Following residencies in general medicine and surgery in the United States and Canada, Dr. Uy began private practice in New Brunswick, Canada. He became a permanent resident of the United States in 1975 and since 1981 has operated a family practice in Des Moines, Iowa.

Dr. James W. Rathe, Waverly, recently attended the 1982 Leadership Conference of the American Society of Internal Medicine in Albuquerque, New Mexico. Dr. Rathe is president of the Iowa Society of Internal medicine. . . . **Dr. Robert C. Larimer**, Sioux City, recently participated in a symposium at Harvard Medical School in Cambridge, Massachusetts. Dr. Larimer's topic was "Solo Practitioner — Internal Medicine." . . . **Dr. Roger Davidson** recently joined **Dr. L. V. Larsen** and **Dr. Wing-Tai Fung** in Harlan. Dr. Davidson received the M.D. degree at U. of I. College of

(Please turn to page 340)



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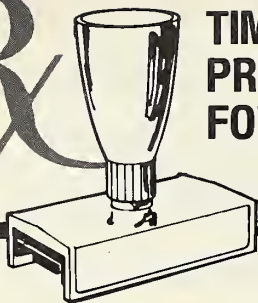
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Medicine and served his family practice residency at St. Mary's Hospital Medical Center in Madison, Wisconsin. . . . **Dr. Noel Robitaille** and **Dr. Ron Abbott**, former Waterloo physicians, recently began family practice in La Porte City. Dr. Robitaille received the M.D. degree at Laval University in Quebec, Canada. He served with the Royal Air Force as medical officer and engaged in private practice in Ontario, prior to locating in Waterloo. Dr. Abbott received the M.D. degree at Glasgow University in Scotland. He practiced in Canada for several years, prior to locating in North Dakota and later Waterloo.

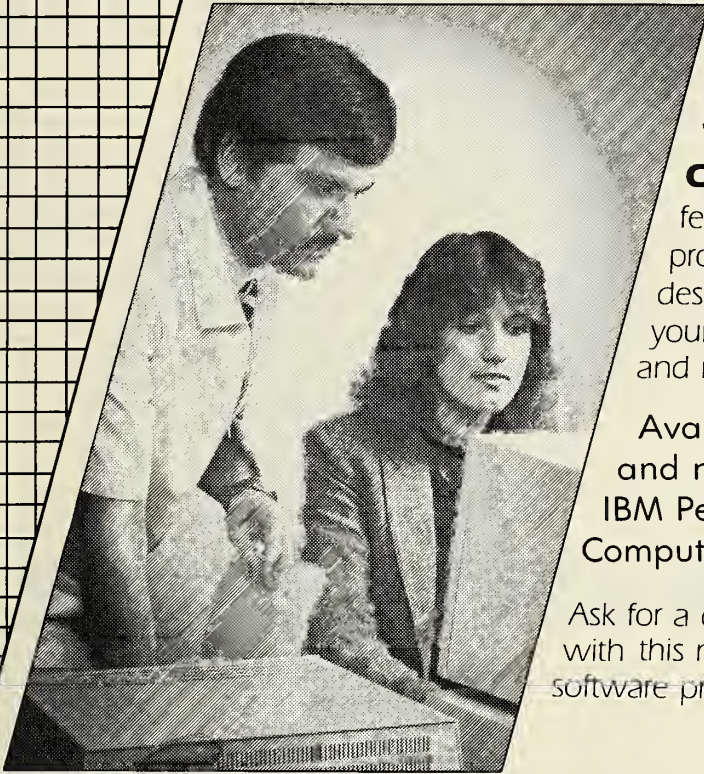
Dr. David Swieskowski has joined **Dr. Thomas Peacock** in family practice in Des Moines. Dr. Swieskowski received the M.D. degree at the U. of I. College of Medicine and completed his family practice residency at Broadlawns Medical Center in Des Moines. . . . **Dr. William B. Bean**, Emeritus Professor of Medicine and Sir William Osler Professor at the U. of I. College of Medicine, received the Robert Williams Award for Distinguished Chairman of

Departments of Medicine at a recent meeting of the Association of Professors of Medicine in Washington, D.C.

Dr. S. Donald Zaentz, Ames, was guest speaker at a recent meeting of the Boone and Story County Medical Societies. Dr. Zaentz spoke on "Current Concepts in Lung Cancer." . . . **Dr. Robert T. Soper**, U. of I. professor of surgery and director of pediatric surgery, has been elected vice president-general surgery of the Pan Pacific Surgical Association. . . . **Dr. Jack Dodd**, Ames, recently was named president-elect of the Iowa Psychiatric Society. . . . **Dr. Christopher S. Clark** and **Dr. James S. Brooks** began the practice of psychiatry at the Ottumwa Clinic in July. Dr. Clark received the M.D. degree at Yale Medical School and interned at the University of Oregon Health Sciences Center. Following his psychiatry residency at Yale Medical School, Dr. Clark served as a child psychiatry fellow at the University of Washington School of Medicine in Seattle. Dr. Brooks received the M.D. degree at Wayne State University; interned and served his psychiatric residency at the University of Colorado Medical Center in Denver. Prior to locating in Ottumwa, Dr. Brooks was a staff psychiatrist at Colorado State University in Pueblo.

Dr. John R. Carroll recently began family practice at the Carroll Medical Center. A native of Sibley, Dr. Carroll received the M.D. degree at the U. of I. College of Medicine, and completed his family practice residency at Michael Hospital in Milwaukee, Wisconsin. . . . **Dr. Robert W. Thorbrogger** recently was appointed staff radiologist at hospitals in Hartley, Primghar, Sheldon and Sibley. Dr. Thorbrogger received the M.D. degree at the U. of I. College of Medicine and completed his radiology residency at the University of Minnesota Hospitals where he served as chief resident in his final year. . . . **Dr. Chule Auh**, director of training, Cherokee Mental Health Institute, recently resigned that position to enter the private practice of psychiatry in Sioux City. A member of the staff at the Cherokee MHI since 1970, Dr. Auh will be associated with Dr. Richard Satterfield and the Sioux City Family Practice Residency Program.

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DEATHS

Dr. Faye Lewis, 86, longtime Webster City physician, died June 10 at the Hamilton County Hospital in Webster City. Dr. Lewis received the M.D. degree at St. Louis University School of Medicine, where she was the first woman medical graduate, and interned in Halstead, Kansas. In May, 1982, Dr. Lewis was selected by the Webster City Business and Professional Women as the outstanding business woman of the past 125 years. This title was bestowed at the community's 125th anniversary in recognition of her contributions during many of those years. A former columnist for the *FREEMAN-JOURNAL*, Dr. Lewis also published two books, "Doc's Wife," and "Nothing to Make a Shadow." She was a member of the Quill Club, the Women's Club, the Business and Professional Women's Club and a 25-year member of the Kendall Young Library Board.

Dr. William M. Crawford, 66, Burlington, died June 27 at the Burlington Medical Center. Dr. Crawford received the M.D. degree at Glasgow University Medical School in Glas-

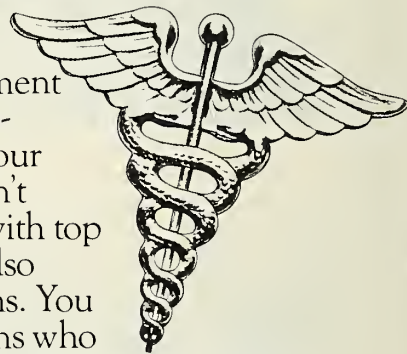
gow, Scotland. A resident of Burlington since 1949, he was a member of the American Psychiatric Society, and director of the Des Moines County Mental Health Center from its establishment in 1949 until April, 1959.

Dr. Cecil Hamilton, 79, Ames, died June 5 at an Ames Medical Center. Dr. Hamilton received the M.D. degree at the U. of I. College of Medicine. Following 25 years of medical practice in Garner, he joined the Iowa State University Student Health Service, retiring in 1973. Dr. Hamilton was a past president of the American Academy of Family Physicians, Iowa Chapter.

Dr. Bernard R. Goldman, 57, Davenport, died June 26 at Mercy Hospital in Davenport. Dr. Goldman received the M.D. degree at the University of Illinois College of Medicine; interned and served his internal medicine residency at Cook County Hospital in Chicago. Following military service in the U. S. Air Force, he joined Dr. Cecil Zukerman in private practice in Davenport. Dr. Goldman was a member of the American Society of Internists.

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In The Public Interest

Medical History In the Making



HISTORY HAPPENS with each blink of the eye. Around the world. In our nation's capital. And not leastly, in Iowa medical care delivery.

If this be true, still and all most of us fail to appreciate that fact. We live in a *today* mode. We are more tuned to the *now* and the *future*. Oh, the past may be good for occasional reminiscing and for checking on our progress. But, regrettably, speaking in societal terms, most of us assign little significance to the recording of history.

Fortunately, there are a few stalwarts who recognize the value of recording what has happened and what is happening. One such body exists within Iowa medical ranks. This small band of energetic physicians is the Iowa Medical Society Historical Committee.

The members of this active unit deserve to be named: Paul E. Huston, M.D., Iowa City (chairman); Marion E. Alberts, M.D., Des Moines; Glenn C. Blome, M.D., Ottumwa; John Martin, M.D., Clarinda; Adolph L. Sahs, M.D., Iowa City; Robert A. Sedlacek, M.D., Cedar Rapids; John G. Thomsen, M.D., Des Moines; Clare A. Trueblood, M.D., Indianola, and Herbert W. Rathe, M.D., Waverly.

The work of these Iowa physicians is dedicated in part to a deceased colleague and a former committee member. The late Wallace Longworth, M.D., of Boone, and for several years prior to his death of Ames, was a source of particular inspiration as a co-chairman. His interest in and zest for Iowa medical history was infectious.

So, what are these physicians doing to preserve Iowa medical history?

For better than two years the committee members have been participating directly in an "oral" medical history project. They have interviewed 40 Iowa physicians (approximately one hour each), selected from varied educational and practice backgrounds.

These interviewees come from rural and urban settings, from different types of practice, and from varied responsibilities. They are

graduates of nine different medical schools, and they represent eight medical specialties.

Of the 40 taped interviews, 36 have been transcribed. One copy of each interview transcript is located at the State Historical Society office in Iowa City and one is at Iowa Medical Society headquarters. Approximately 800 typed pages are involved totally.

The IMS committee has received valuable counsel from Michael Gibson of the State Historical Society. In turn, Mr. Gibson credits the committee with amassing some excellent information for interested individuals and particularly for future researchers of Iowa medical history. The interviewees were asked a series of identical questions to see if answer patterns might emerge on such topics as technological advance, medical education, socioeconomic concerns, etc. And you can bet the personal anecdotes of 40 physicians (between ages 53 and 88) are certain to inform and amuse.

As a next step in this ongoing project, the committee members are studying the responses from each interview. From this they are preparing summaries to cover specific areas: medical advances, medical education, detrimental factors in medicine, elements of professional satisfaction, etc. These summaries by individual committee members will be published periodically in the JOURNAL OF THE IOWA MEDICAL SOCIETY.

For example, the summary on career satisfaction reports that all but one interviewee were highly gratified over their selection of medicine as a career. The ability to prolong life and relieve suffering was cited as a main source of satisfaction, and with some, particularly those practicing in more recent decades, the increased opportunity to prevent disease was emphasized. The eradication of polio is noted frequently here.

These summaries of Iowa medical history will make interesting reading. Their publication in the IMS JOURNAL will contribute further to the content of our medical care annals.

We step from day to day and forget much of what has gone before. We depend on the historians to furnish a chronicle of our times. We are indebted to the IMS Historical Committee.

August 1982

Journal of the Iowa Medical Society



PRESIDENT'S PRIVILEGE

PROBABLY YOU'VE talked with fellow physicians about the recent actions of our State Insurance Commissioner relative to Blue Cross/Blue Shield. His July pronouncements have been covered extensively in the media. And, as this is written, the matter is alive and pending.

In July when Blue Cross/Blue Shield announced a 32% increase in health coverage rates for some 28,000 state employees, the decision gained notoriety. A state committee headed by Commissioner Foudree decided to resist the increase.

Meetings of the BC/BS boards have followed. An August 2 letter from BC/BS asked Commissioner Foudree to amend his order. He was asked to clarify his language and permit a more realistic timetable. This is where the scenario stands as this is written. In their comments the Blues specified a wish to retain their right to contest the legality of the Commissioner's actions.

Some observers call the Commissioner's actions precipitous. It's true the efforts of various private and public agencies are having and expect to have a further positive effect on cost and utilization. Cited for their work are the Iowa Voluntary Cost Containment Committee, the Governor's Commission on Health

Care Costs, the Iowa Foundation for Medical Care, the Iowa Health Systems Agency, etc.

Others say that talk and analysis have been abundant; now is the time for definitive action as the Commissioner proposes. This viewpoint is predictable and deserves consideration in these economic times.

Be mindful of the history. Blue Shield emerged some 40 or so years ago as the physicians' plan to assist citizens of varying financial capability. It has served in different economic conditions, yet it has served. And, generally, Iowa physicians have supported its basic objectives.

This history underlies our human wish to provide the best. However, our ability to furnish the best is finite. We are bumping against our limitations. Our advocacy has been that of deliberate action. Change needs to follow an evolutionary path.

Quality comes first, access a close second, with economic fairness not far behind.

Hormoz Rassekh, M.D.
President

Famous Pairs.

*They work so
well together.*

One of man's most amazing explorations and scientific adventures, the successful Gemini flight program was a triumph of imagination and—teamwork. Two men learned to operate in space, to rendezvous, to dock, and to work outside their spacecraft in the hard vacuum of outer space. Not only did they coordinate their efforts with ground backup, they also complemented each other's activities within the close confines of the space capsule.



THINGS YOU SHOULD KNOW

BLUES' HMO PROGRESS

Six area meetings called "focus group interviews" are occurring in August and September under Blue Cross/Blue Shield auspices to measure physician attitude and receptivity toward development of a statewide health maintenance organization. These sessions are involving 10 physicians at each -- with particular participation from primary care. This project was reviewed at an August 12 meeting of the IMS Committee on Alternate Delivery Systems; findings of the area meetings will be shared with the ADS Committee October 14.

IOWA HOSPITAL LICENSURE

Iowa hospital license laws are being re-drafted by the State Department of Health. They have had no substantial change since written in 1947. The SDH is proposing licensure by category, i.e., general acute, psychiatric, ambulatory surgical, etc. Certification is being suggested for each service a facility provides. A second draft of the department proposal will go to the State Board of Health in November.

LONG-TERM CARE GUIDELINES

A two-page outline entitled, "Physician Guidelines for Documentation in Long-Term Care," has been prepared by the Iowa Foundation for Medical Care. It covers histories and physicals, physician orders, progress notes and medical records. Copies are available on request from IMS headquarters.

HOSPITAL UTILIZATION STUDY

A study of state hospital utilization requested by the Iowa Voluntary Cost Containment Committee was placed in IVCCC hands officially August 17. The study was conducted by John Wennberg, M.D., of Dartmouth University, and SERVI-SHARE of Iowa. Based on 1980 hospitalization, the study adds further data to compendium of material available on this complex topic. 112 population areas in the state have been delineated in the study and figures compiled for each.

CONTACT WITH IOWA CONGRESSMEN

IMS communications have gone in August to Iowa's congressional delegation in Washington, D.C., urging consideration of medicine's position on changes in the Medicare law and also on reform of pension plan statutes.

COMMISSION CHAIRMAN COMMENTS

Speaking in response to the recent order issued by Insurance Commissioner Foudree to Blue Cross/Blue Shield, R. Melvin Henderson, Ph.D., chairman, Governor's Commission on Health Care Costs, said he favors deliberate, cooperative application of lowered utilization measures; this basic philosophy pervades the Commission's recommendations. He questioned the time frame allowed by the Insurance Commissioner.

X-RAY STANDARDS

Further discussion is planned in September on rules proposed by the State Department of Health covering minimum training standards for x-ray equipment operators. Questions on the impact of these rules on small hospitals have been raised by the Iowa Hospital Association and IMS.

TROUBLED PHYSICIAN PROGRAM

IMS members are reminded of the Assistance Program for Troubled Physicians. This Society program is over two years old and is helping individuals with conditions or problems potentially threatening to professional competence. It is a voluntary and highly confidential program. Assistance requests may be directed by letter or telephone (515/223-1401 or 800/422-3070) to IMS headquarters.

HEALTH PLANNING WITH LOCAL EMPHASIS

In its early priorities, the new Health Planning Corporation of Iowa is seeking to blueprint ways of organizing voluntary local health planning to service community and area entities. The IMS has given HPCI its AMA guidelines for local, voluntary health planning to aid this effort.

A reputation takes years to build. We've been building ours as a major provider of professional liability for over 50 years, and as the Iowa Medical Society sponsored program since 1977. Since that time Aetna has returned savings to doctors of over \$1,100,000. These substantial savings have resulted from working closely with your society to provide successful risk management programs.

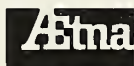
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QUESTIONS - ANSWERS

N. K. Rinderknecht, M.D.
Des Moines, Iowa

COMMENTS ON CESAREAN STUDY

The following observations are on the Iowa study of cesarean births which appears in this issue. They are the opinions of Dr. Rinderknecht, who is in the private practice of obstetrics and gynecology. Dr. Rinderknecht serves currently as chairman, Iowa Section, American College of Obstetricians and Gynecologists.

Do the findings of this Iowa study of cesarean births surprise you in any particular way?

I was surprised at the rather high primary cesarean birth rate and the high total cesarean birth rate reported from some hospitals in the state. However, I would hasten to add that these figures may be influenced by a large number of high-risk obstetric patients. Indeed, it is more important to give each individual obstetric patient the best care possible than to be concerned about the primary cesarean section rate in a particular hospital. I was also surprised to find that nearly 80% of the primary cesarean births were performed for either fetal-pelvic disproportion or failure to progress in labor. While I would agree that this category, including dystocia, fetal-pelvic disproportion, uterine dysfunction and failure to progress,

is the most common indication for primary cesarean sections reported in most series, the incidence of nearly 80% seems rather high.

It appears Iowa relates favorably to national data developed on this procedure. Agree?

I would agree that the data reported in this study relates favorably to national data with regard to total cesarean rate, maternal mortality and perinatal mortality. As mentioned in my previous answer, I would feel that the 78% primary cesarean section rate performed for either fetal-pelvic disproportion or failure to progress in labor in this study is a bit higher than reported in most other recent series.

What about electronic fetal monitoring? Is it your impression it's being used appropriately or is it tending toward excess?

Medical technology has improved tremendously in the past decade. Indications for electronic fetal monitoring are well known by most all physicians caring for obstetric patients. These physicians depend on information from electronic equipment to monitor fetal growth and to evaluate the condition of the fetus before and during birth. The use of electronic fetal monitoring has increased tremendously during the past decade when cesarean section rates have increased related to a variety of factors (i.e., dystocia, breech, fetal distress, etc.). Some studies have shown that 20% of apparently low risk patients develop problems in labor and intermittent auscultation may indeed not be sufficient to identify these problems when they arise. Evidence from the literature does not support the assumption that electronic fetal monitoring is directly responsible for a significant increase in cesarean section rates. In fact, it has been shown that the cesarean section rate for fetal distress need not be increased with electronic fetal heart rate monitoring, provided scalp sampling is available to aid in the evaluation of abnormal monitor tracings. A recent report of fetal monitoring experience from Los Angeles County/University of Southern California Medical Center during the 10 year period from 1970-1979, with more than 115,000 deliveries, reported the perinatal mortality rate decreased in an inverse proportion to the monitoring rate while the primary cesarean section rate in-

(Please turn to page 378)



Outpatient surgery programs do reduce inpatient hospital days and have the potential to significantly impact health care costs in Iowa.

Blue Cross and Blue Shield of Iowa support outpatient programs when medically appropriate as a means to reduce the cost of health care in our state.

And recent data show trends toward more outpatient surgery in Iowa. In fact, many of the medical and surgical procedures suggested by the Iowa Foundation for Medical Care (IFMC) as

appropriate for an outpatient setting were performed on an outpatient basis last year.

We are encouraged that more physicians and their patients are realizing the benefits of outpatient surgery.

We all need to work to maintain a qualitative, affordable health care delivery system.



**Blue Cross
Blue Shield**

of Iowa

This is the fourth in a series of Continuing Medical Education/Shared Study Reports. It is based on a study of 1,882 Cesarean births in 92 Iowa hospitals. Findings indicate the Cesarean birth rate is rising in Iowa, but apparently below the national range of estimates. Electronic fetal monitoring is cited as a potential reason for the increase.

You will find a special two-page insert with this report. It is an 8-question quiz. By completing and mailing it with \$3 to the Iowa Foundation for Medical Care you may earn one credit hour in Category I for the Physician's Recognition Award of the American Medical Association. The quiz will be evaluated and returned to you with appropriate comments.

This education project is a joint service of the Foundation, the University of Iowa College of Medicine and the Iowa Medical Society.

Cesarean Birth: The Controversial Cut

CHARLES E. DRISCOLL, M.D.,
RICHARD M. CAPLAN, M.D.,
STANLEY W. GREENWALD, M.D., and
JENNIFER I. COFER, M.A., R.R.A.

SINCE THE MID 1960s, the nation's Cesarean birth rate has climbed from a stable 2 to 5% to 12½% in 1975;¹ some leading obstetricians project a Cesarean birth rate reaching 25%.² Searching medical literature for causes for the increase produces no single, primary reason for more Cesarean operations.

Some authors attribute the widespread increase to the use of electronic fetal monitoring,³ while others believe the increase is almost entirely explained by a change in the approach to breech presentation with no change in the rate of Cesarean birth performed for fetal distress.^{4, 5} A recent review of this

The physician authors are members of the Continuing Education Committee of the Iowa Foundation for Medical Care. The following physicians provided additional assistance for which appreciation is expressed: Michael J. Richards, M.D., Harold A. Van Hofwegen, M.D., Francis L. Pisney, M.D., and George H. West, Jr., M.D.

TABLE I
CHARACTERISTICS OF STUDY SAMPLE OF CESAREAN BIRTHS

Hospitals participating	92 (70% of Iowa hospitals)
Patients studied	1,882
Average age	24.8 years
Average length of stay	6.7 days
Number of physicians with patients under study	421
Average bed size of participating hospitals	141
Range of bed size	17-1,100

subject by Bottoms *et al* attributes the increased rate to a multitude of factors, including the relative safety of Cesarean birth for the mother and fetus, improved prognosis for the infant of low birth weight following Cesarean birth, changes in the health care delivery systems, and specific obstetrical factors (dystocia, previous Cesarean birth, breech presentation, and fetal distress).⁶ Their study includes a review of 123,847 patients and presents a geographical

CME/SSR No. 4 in a Series

perspective. In this large series, Cesarean birth for dystocia accounts for the largest single part of the increase in Cesarean birth rate (33.4%) followed by repeat Cesarean births (23.1%).

The question is whether the increase in Cesarean births is due to iatrogenic manipulation or to a real improvement in the quality of obstetrical care. Recently, government agencies have placed increasing importance on determining the cost benefits of fetal monitoring and Cesarean births. In his article on the effect of electronic fetal monitoring on obstetrical management,¹ Hess remarks "it is ironic that such emphasis on determining cost benefits of fetal monitoring should occur at a time when perinatal mortality, the universally accepted index of quality of maternal infant care, has been reduced by 40-50%." Comments in the public press have added heat to the debate

over the rising Cesarean rate,⁷ and some authors have suggested a parallel increase of home delivery due to lack of confidence in the safety of hospital delivery.

In October, 1978, a national task force of 9 Professional Standards Review Organizations (PSROs) met to discuss a shared study of Cesarean births. The project was conceived by the Colonial Virginia Foundation for Medical Care with the following objectives:

- 1) to determine representative national patterns of practice for primary Cesarean births,
- 2) to evaluate regional variations and indications, lengths of stay, and other parameters of Cesarean births,
- 3) to evaluate maternal operative and postoperative complications and to document regional variations, and
- 4) to evaluate immediate neonatal outcome.

The Iowa Foundation for Medical Care (IFMC) was one of the 9 PSROs to formulate the study, and the following discussion presents data from the participating Iowa hospitals. (The aggregate data of all the PSROs has yet to be publicized and will not be commented on.)

IOWA DATA

IFMC data came from the reports of 92 Iowa hospitals, which were told to sample the first 50 consecutive cases from June 30, 1978, to June 29, 1979. The characteristics of the sample studied are reported in Table I. The number of primary Cesarean births for the specified one-year period was 2,831; the IFMC studied 1,882 (66%) of those. There were 39,119 deliveries for this period, so the primary Cesarean birth rate was 7.2%. During this same time, there were 1,159 repeat Cesarean births for a rate of 3.7%. When primary and repeat Cesarean births were combined, the total Cesarean rate for Iowa was 10.9%, below the various national estimates of 11 to 18%.^{2, 6, 8, 9} Primary Cesarean birth rates across participating Iowa hospitals ranged from 0.8% to 16% except for 3 hospitals with rates of 19%, 21%, and 27.2%. The repeat Cesarean birth rate varied from 0% to 9.5%. The range of the total (primary and repeat) Cesarean birth rates in Iowa hospitals was 1.4% to 23% except for 2 hospitals with rates of 28% and 34.5%.

The 6 criteria used for this study consisted of justification for surgery, maternal mortality,

Indications Given for Cesarean Birth

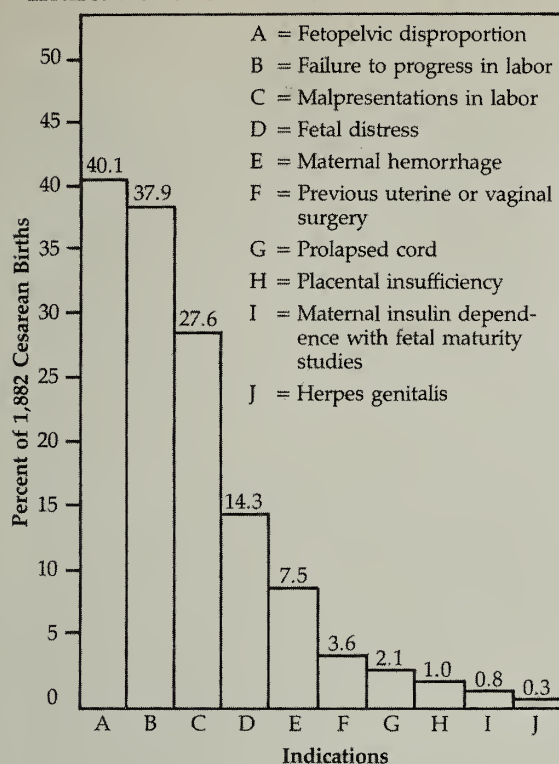


Figure 1

mortality of the infant during hospitalization, minimum and maximum lengths of stay, and discharge of the infant with or before the mother.

Justification for Surgery

The results of the first criterion, justification for surgery, can best be understood from Figure 1. Seventy-eight percent of the primary Cesarean births were performed for either fetal-pelvic disproportion or failure to progress in labor. Fifty-one percent of all Cesarean births (primary and repeat) were explained by these 2 reasons. This figure is consistent with the trend found by Bottoms *et al*⁶ in their report of 33.4% of Cesarean births accounted for by dystocia.

The next indication for primary Cesarean birth was malpresentation in labor, which includes the breech presentation. This finding can be related to the large number of studies reporting increase in the Cesarean birth rate primarily due to the breech presentation and to a changing philosophy with regard to management of breeches by abdominal rather than vaginal delivery. The next prominent reason

for Cesarean birth was fetal distress, accounting for an insignificant proportion of the total cases.

When reason percentages were summed, the total was greater than 100% because of multiple reasons for Cesarean births for some patients.

The number of variations for criterion one was 104 (5.5%) with 87 of the 104 variations (84%) considered justified. The remaining 17 Cesarean births were considered to be performed without indications acceptable to the local reviewing committee. Three cases reported as nonjustified by one hospital actually seemed to be Cesarean births performed for very sound indications and probably should have been approved by the local review committee. This would have reduced the total nonjustified Cesarean births to 14. Reasons cited for nonjustification included 5 cases where no reason for Cesarean could be found documented in the medical record, 4 cases where no trial of labor with pitocin stimulation was

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given when indicated for slow labor, and miscellaneous reasons including a patient's demand for Cesarean birth "to avoid difficult labor she had had with two prior pregnancies." There seemed to be no trend toward a single reason for classifying the Cesarean birth as not justified. The variation rate, even before justification, was a small departure from the expected compliance with the criterion.

Maternal Mortality Rate/Mortality of Infant

A maternal mortality rate of 0 percent was expected even though other studies show maternal mortality after Cesarean birth is somewhere between 2 and 8 per 10,000 cases.¹ Of 1,882 patients studied, there was one maternal death, giving a mortality rate of 5.3 per 10,000. Mortality of the infant during hospitalization was the third criterion, and 27 in-

fant deaths occurred in the Iowa population studied. Unfortunately, the study did not request the total number of babies delivered, so it is impossible to determine whether twinning might have accounted for the larger number of infant mortalities. Twin pregnancy occurs in one in 100 white and one in 79 black pregnancies¹⁰ while triplet pregnancies have a frequency of one in 8,100.¹¹ On this basis, an additional 19 babies could have been in the study, yielding a theoretical total of 1,900 babies. This would yield an infant mortality of 1.4% or 14 per 1,000, a perinatal mortality rate that is an improvement over the rate of 21 per 1,000 reported by Bottoms *et al* for the year 1976. In the Iowa study, the most frequent

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reason cited for perinatal mortality in hospitals where more than one fetal death occurred was multiple congenital anomalies (5 of 9 cases).

Lengths of Stay

Criteria 4 and 5 dealt with length of stay. The limits chosen were 3 days minimum postoperatively and 7 days maximum postoperatively. Only 13 patients (0.69%) varied from this criterion because of shorter than expected lengths of stay. One hundred seventy-six patients (9.4% of the sample) exceeded the recommended maximum 7 days postoperative stay. Of these 176 variations, 167 were justified by local review committees, leaving a total of 9 that could not be reasonably excused for extended stay. The IFMC could identify no readily correctable patterns for the extended stays that average 1.4 days over the maximum expected.

TABLE II
PRIMARY CESAREAN BIRTH RATES ACCORDING TO PERCENT
OF PATIENTS MONITORED

Electronic fetal monitoring rate %	Number of hospitals	Average primary Cesarean birth rate %
0	43	5.7
1- 24	10	5.4
25- 49	10	7.5
50- 74	16	8.9
75-100	13	9.3

Discharge of Mother/Infant

The final criterion attempted to assess morbidity in the infant by expecting all infants to be discharged before or at the time the mother was released from the hospital. Exceptions to this rule were transfer to another acute care facility for neonatal intensive care or death of the infant. Fifty-four cases met the first exception and 27 met the second. This is a direct measure of undesirable fetal outcome. Seventy-three variations to this criterion were noted (3.9%) and 69 were justified, leaving a total of 4 as unjustified variations. The reasons hospital committees chose to justify infants' stays beyond the mothers' stays were prematurity (20), weight gain in infants small for gestational age (10), treatment of jaundice (10), treatment of various infections (10), and other medical causes (14). Only 5 awaiting adoption appeared not to have a medical reason for the delay. The reasons for nonjustification include *record did not state whether baby went home with mother* (3), and *record did not state why infant and mother did not go home together* (1).

Finally, it is relevant to discuss electronic fetal monitoring during labor. The use of electronic fetal monitoring varied among the hospitals studied from a low of 0% in 43 hospitals to a high of 100% in one hospital. The total number of patients monitored in this study was 668 (35%). Hospitals with a zero rate of electronic fetal monitoring had a primary Cesarean birth rate of 5.7% (total rate of 8.2%) while the one hospital with 100% use of fetal monitoring had a primary Cesarean birth rate of 27.2% (total rate of 35.4%). It would be tempting to conclude that increased use of fetal monitoring leads to more frequent Cesarean

(Please turn to page 367)

CESAREAN BIRTH: THE CONTROVERSIAL CUT

Continuing Medical Education Credit Quiz

This learning experience is intended for all Iowa health professionals with an involvement in obstetrical care. When the learner has read the preceding article, he/she will have information on current practices and outcomes in Iowa related to Cesarean births.

One hour of continuing medical education credit (AMA Category I) is offered to those who read this article and answer the questions. Please answer the questions and submit them with the information requested. Simply (1) check the correct answers; (2) enter the information requested; (3) remove this page from the JOURNAL; (4) prepare a check for \$3 to cover administrative costs and make payable to the University of Iowa; and (5) mail the quiz and check to the Iowa Foundation for Medical Care, Colony Park, Suite 500, 3737 Woodland Avenue, West Des Moines, Iowa 50265. You will be provided a report on your quiz and a confirmation of the CME credit.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Iowa College of Medicine, designates this CME activity as meeting the criteria for one credit hour in Category I for education materials for the Physician's Recognition Award of the American Medical Association provided it has been completed according to the instructions.

PLEASE ANSWER THE FOLLOWING QUESTIONS (Choose the one best answer)

1. In a large series of patients reviewed by Bottoms, the largest single part of the increase in Cesarean birth rate was accounted for by:
☐ A. Repeat Cesarean births
☐ B. Electronic fetal monitoring
☐ C. Dystocia
☐ D. Breech presentation
2. In Iowa, the total Cesarean birth rate in 1978 compared to the national estimate was:
☐ A. Lower
☐ B. The same
☐ C. Higher
3. In the 1978 Iowa study, the most frequently offered reason for primary Cesarean birth was:
☐ A. Failure to progress in labor
☐ B. Fetopelvic disproportion
☐ C. Fetal distress
☐ D. Malpresentation in labor
4. Expected maternal mortality after Cesarean birth is approximately:
☐ A. 2-8/10,000
☐ B. 14-21/10,000
☐ C. 25-28/10,000
☐ D. 30-35/10,000

(Please turn to reverse side)

5. Twin pregnancy in the white race is:

- ☐ A. Less common than in the black race
- ☐ B. Twice as common as triplet pregnancy
- ☐ C. Less common than previously supposed
- ☐ D. The most common cause in Iowa for perinatal mortality

6. In the Iowa study, the most frequent reason cited for perinatal mortality associated with Cesarean birth was:

- ☐ A. Prematurity
- ☐ B. Asphyxia/R.D.S.
- ☐ C. Infection
- ☐ D. Multiple congenital anomalies

7. Electronic fetal monitoring use in Iowa:

- ☐ A. Has no association with Cesarean birth rate
- ☐ B. Is associated with a higher rate of Cesarean birth
- ☐ C. Causes an increase in Cesarean birth
- ☐ D. Is restricted mostly to high risk obstetrics

8. Problems with Cesarean birth in Iowa include:

- ☐ A. Too many Cesarean births are done without proper indications
- ☐ B. Higher maternal and fetal mortality rates than national average
- ☐ C. There is an appreciable level of fetal morbidity associated with Cesarean birth
- ☐ D. Excessive length of stay

PLEASE DO THE FOLLOWING IN ORDER TO RECEIVE CREDIT:

1. Be sure your answers are indicated in the boxes provided.
2. Remove this page from the JOURNAL.
3. Make a check for \$3 payable to the University of Iowa to cover administrative costs.
4. Insert the information requested below.
5. Mail this page and check to Iowa Foundation for Medical Care, Colony Park, Suite 500, 3737 Woodland Avenue, West Des Moines, Iowa 50265

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delivery, but the data do not include controls for the proportion of high risk pregnancies in each hospital. Table II displays the relationship of Cesarean birth rate to the increased use of electronic fetal monitoring.

SUMMARY

The data presented here encompass a large sample size compared to other studies reported in the literature. Of importance in drawing conclusions from this data is the relative lack of control over the quality of data collection and abstraction. Some implications for Iowa physicians can be stated as follows:

1) *The Cesarean birth rate in Iowa appears to be rising and is now approximately 7.2% for primary and 3.7% for repeat Cesarean births. Total Cesarean birth rate is 10.9% which compares favorably with the higher national range of estimates of 11 to 18%.*

2) *Very few Cesarean births are performed in Iowa without appropriate indications.*

3) *Maternal and perinatal mortality rates in Iowa are the same or lower than the national averages.*

4) *Extended length of stay is not a problem with Cesarean birth care in Iowa.*

5) *Electronic fetal monitoring use in Iowa is associated with a higher rate of Cesarean births. From the manner in which data were collected, however, it is impossible to determine whether monitoring is causing an increase in Cesarean births or is guilty by association, being more likely to be employed in high-risk obstetrics.*

If the Cesarean birth rate continues to increase, Iowa physicians must assure that improved maternal and fetal outcomes justify the practice. An increased cost in dollars, morbidity, and mortality must not be the price paid for deliveries unaccompanied by improved fetal outcomes. Cesarean birth carries 2 to 4 times the risk of maternal mortality over that of vaginal delivery.⁸ Altering the long-held policy of "once a Cesarean always a Cesarean" is one possible change that could significantly reduce the number of Cesarean births. Many studies suggest that labor and vaginal delivery can safely be accomplished when the primary Cesarean delivery was performed for nonrecurring indications (e.g., placenta previa or fetal distress) and when the operation was of the low transverse segment type.¹² Informed consent should be obtained from the mother be-

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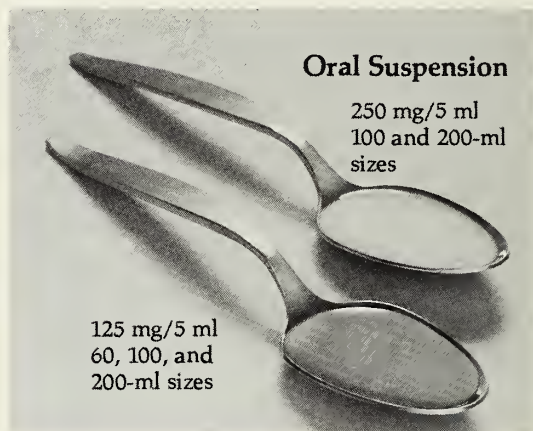
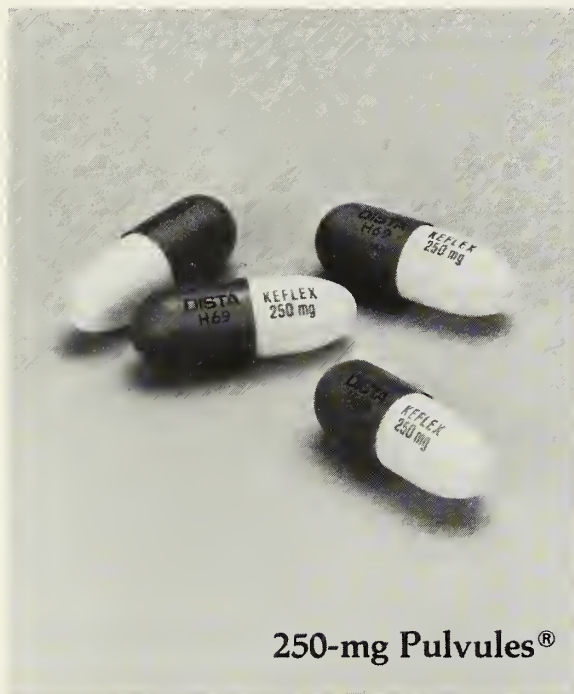
fore the trial of labor and the physician must carefully monitor the labor, attend constantly, and perform emergency surgery should immediate Cesarean delivery become necessary.

As a final suggestion for continuing education activity, physicians are directed to the National Institute of Health Consensus Development Conference Summary, Volume 3, Number 6, "Cesarean Childbirth." The Consensus Development Conference was held at the National Institute of Health in September, 1980, to address issues that have arisen concerning Cesarean childbirth. Copies may be obtained from: Office for Medical Applications of Research, National Institute of Health, Building #1, Room #216, Bethesda, Maryland 20205.

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Impact of IFMC On Inpatient Service

ROBERT A. PFAFF, M.D.

Dubuque, Iowa

CONTRADICTORY AMERICAN attitudes toward health care have created an interesting predicament for physicians — a predicament whose solution rests with physician peer review. On the one hand, Americans list high health care costs as the most important medical care issue, even more important than availability of care or quality of care. On the other hand, Americans want excellent health care — when we're sick, we don't care how much treatment costs as long as it makes us well.

The predicament for the medical profession? Delivering high quality, available health care at a reasonable cost. The Iowa Foundation for Medical Care (IFMC) believes this goal is best reached and ensured when physicians retain peer review responsibility for the medical profession.

Our emphasis is on reducing the number of unnecessary admissions in Iowa's hospitals and in reducing the lengths of stay for necessary admissions.

Dr. Pfaff is president of the Iowa Foundation for Medical Care. He has also served on two task forces for the Governor's Commission on Health Care Costs and has held health planning responsibilities. He is associated with Medical Associates in Dubuque in the practice of urology.

Notable reductions have been observed in the inpatient performance of certain procedures. IFMC President Pfaff cites these figures to illustrate the impact of the Foundation on health care delivery.

According to the American Hospital Association, Iowa uses 18% more inpatient days than the national average. In 1980, we used 1,425 days of inpatient care for every 1,000 Iowans. Comparable national use was 1,208 days. Between 1955 and 1979, admissions per capita in Iowa increased 61%. The national increase was 38%. Our use rate has exceeded the national average consistently for the past 25 years. The Foundation program is seeking to deal with this disparity.

Analysis of Foundation data in late 1981 showed that 3 procedures on the IFMC outpatient/same-day surgery list accounted for 37% of all probable outpatient/same-day surgery procedures still being done inpatient in Iowa hospitals. The three — dilation and curettage of the uterus, surgical tooth extraction, and cystoscopy — were the subject of the pre-admission screening program we began last March.

The Foundation has seen dramatic reductions in these three procedures this year. Analysis of hospital data for January through May, 1982 (with May abstracts from 71% of

THE IOWA MEDICAL FOUNDATION HAS DESIGNATED THIS ARTICLE AS THE HENRY ALBERT
SCIENTIFIC PRESENTATION FOR THE MONTH OF SEPTEMBER 1982

INPATIENT DECLINE
FOR THREE PROCEDURES

	Number of Admissions January through May	
	1981	1982
Dilation and curettage of the uterus	830	390
Surgical tooth extraction	412	216
Cystoscopy	746	430

Iowa hospitals) shows major reductions in comparison with data for the same months in 1981. Dilation and curettage of the uterus admissions have declined 53% (from 830 admissions to 390 admissions), surgical tooth extraction admissions have declined 48% (from 412 to 216 admissions), and cystoscopy admissions have declined 42% (from 746 to 430 admissions).

In addition, the 17 procedures that account for about 90% of the procedures on the IFMC outpatient/same-day surgery list still being done inpatient also declined 43%, from 3,793 admissions during the first 5 months of 1981 to 2,157 admissions during the same period of 1982. These 17 procedures are:

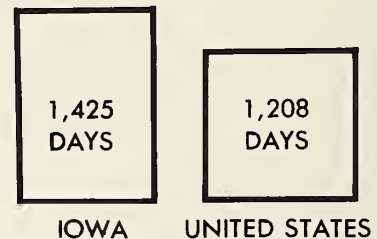
- CARPAL TUNNEL RELEASE,
- MYRINGOTOMY WITH INTUBATION,
- MYRINGOTOMY,
- TOOTH EXTRACTION,
- SURGICAL TOOTH EXTRACTION,
- SMALL BOWEL ENDOSCOPY,
- FLEX FIBEROPTIC COLONOSCOPY,
- LARGE BOWEL ENDOSCOPY,
- PROCTOSIGMOIDOSCOPY,
- UNILATERAL INGUINAL HERNIA REPAIR,
- CYSTOSCOPY,
- URETHRAL DILATION,
- BILATERAL ENDOSCOPIC DIVISION OF TUBES,
- BILATERAL ENDOSCOPIC OCCLUSION OF TUBES,
- DILATION AND CURETTAGE OF THE UTERUS,
- KNEE ARTHROSCOPY, AND
- BREAST BIOPSY.

Physicians and hospitals are working together through peer review to bring about these reductions.

SPECIFIC 1982 PLAN

Last spring, in a further effort to reduce utilization of hospital services, the Iowa Foundation for Medical Care Board of Directors adopted a specific 1982 Foundation action plan. Based on IFMC data pinpointing 3 areas that could have the greatest effect on acute care use, the plan focuses on inpatient days for probable outpatient/same-day surgery procedures, acute facility admissions that exceed 60 days (review begins at 30 days), and 136 specif-

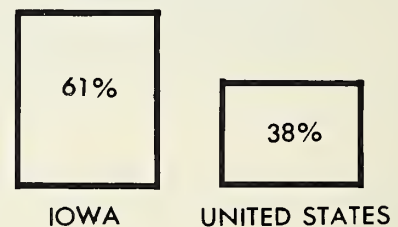
INPATIENT DAYS PER 1M PERSONS



SOURCE: AMERICAN HOSPITAL ASSOCIATION

ic physicians (out of Iowa's more than 3,500) who have exceeded statewide averages for lengths of stay by 2 or more days. Although we realize a great many of the variations the IFMC data have pinpointed may be justified by medical necessity, we want to ensure the care

HOSPITAL ADMISSION INCREASE
PER CAPITA
BETWEEN 1955-1979



Iowans receive is appropriate. Excessive or inappropriate use of hospitals is not high quality medical care. Obviously, it is not cost effective either.

The Iowa Foundation for Medical Care is asking Iowa physicians to perform outpatient and inpatient procedures appropriately. We are asking physicians to document medical ne-

cessity for every admission and to eliminate unnecessary admissions.

In this crucial time for physician peer review in Iowa, the Foundation wants to ensure continuation of the program. The IFMC leadership believes peer review has proven its effectiveness in serving both the medical profession and the public. IFMC physician members have

accepted the challenge of reducing the rate of health care cost increase without sacrificing either quality of care or availability of care. We have chosen to prove our accountability through the peer review system.

Together, we have begun to satisfy the contradictory attitudes of Americans toward health care.

SCIENTIFIC/SKI MEETING

The Northwestern Medical Association convenes for its 36th Annual Meeting at Sun Valley, Idaho, from February 7-11, 1983. Transplants-implants, general medical subjects, ski-injury prevention, high altitude physiology and financial planning will be discussed by experts. Approved for 10 CME Category I credits. Registration 3 to 5 p.m. on February 7, Challenger Inn, Sun Valley. Non-members registration \$100. For information write to Norman Christensen, M.D., 2456 Buhne Street, Eureka, California 95501 or phone 707/443-2248.

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Friday, November 19, 1982

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COMMENTING EDITORIALLY

MARION E. ALBERTS, M.D.
SCIENTIFIC EDITOR

A CHALLENGE

Doldrums, n, pl, low spirits; period of inactivity.

THE HEAT of summer is yet with us. Vacations for most have come and gone. The activities associated with warm weather have reached their heights. Now comes a short period of relative inactivity. We are in a transition between the fun of summer and renewed activities of fall and winter. Children and youth are returning to schools and colleges. Our hospital and medical society meetings resume. So we need to go into another new season with renewed vigor and dedication to purpose.

Sir William Osler said, *"Things cannot always go your way. Learn to accept in silence the minor aggravations, cultivate the gift of taciturnity, and consume your own smoke with an extra draught of hard work, so that those about you may not be annoyed with the dust and soot of your complaints."* Granted, there are many headaches associated with medical practice. There are also ways to alleviate those headaches. An area where many headaches evolve is in hospital practice. Some physicians become disgruntled because it seems the *super-specialists* are the "fair-haired boys" of the administrators, while "old Doc" must be tolerated as long as he adheres to the rules and regulations. The general physician works with the skills he has developed, utilizing specialized skills when hospital regulations will allow him to exercise them. He is not in a very strong position to bargain for the hospital to purchase for his use the highly sophisticated (and very expensive) diagnostic and surgical equipment.

In the larger medical centers increased num-

bers of consultations have become mandatory for the benefit of the patient and general physician alike. Truly the patient benefits from the new sophisticated instrumentations (for a price) and the general physician has the newer modalities available to provide better care. Yet, we hear in the physicians' lounge and cloakroom how much money is spent for certain departments, to apply the highly specialized skills of a few persons (at no cost to the physician).

That is the way it is, and we must accept the situation. It will not change as long as significant advances continue in medicine. However, how long can the large expenditures of funds continue? Is it proper that a few can profit so handsomely at the expense of all the patients, for we know that the cost is allocated to the general funds of the hospital. Therefore, all pay a share. Hospital costs rise, insurance premiums soar ever upward, and the bureaucrats scream that something must be done.

Something must be done. As we embark on a new season of hospital staff responsibilities, we must face the facts. There are ways physicians can assist in trimming the cost of hospitalization. There are a lot of ways, but in many instances they will not be done. In some areas concerted efforts have been demonstrated. Closer cooperation between hospitals could develop methods of centralization of support services. Highly sophisticated procedures have been centralized in many instances, and even more could be. Eventually, with highly technical telemetry, it will be possible to provide data in many areas without moving the patient from one facility to another. Such spin-off from space technology must be developed. True, at first these will be expensive, but if the cost is shared between the hospitals without petty jealousies it can be done.

There must be more cooperative effort between physicians, administrators, business leaders, health insurance providers and the government in all areas of health care.

In the complex provision of health care, with so many interest groups involved, all things cannot go our way. Many are becoming annoyed by the dust and soot of our complaints. Hard work in a cooperative spirit can be mutually beneficial. Cast aside the frustrations of the present; work hard in the future for the betterment of all concerned — our patients, as well as ourselves. — M.E.A.



OUR MAN ON EDUCATION

RICHARD M. CAPLAN, M.D.

MANDATORY PATIENT EDUCATION VS. HEALTH EDUCATION

"YOU CAN COUNT on California to lead the way." That may sound to you like a booster's slogan, but perhaps another way to express that idea would be "First Is Sometimes Foolish." I refer to section 1704.5 of the California Health and Safety Code. On January 1, 1981 it became the law of that state that breast cancer patients had to be informed by their physicians regarding alternative and effective methods of treatment, with explanation of the risks, advantages and disadvantages of each method. Failure to so inform a patient would be grounds for a charge of unprofessional conduct. A document was drafted with the aid of the State Cancer Advisory Council to meet the requirement that the information must be presented "in layman's language and in a language understood by the patient." There must be great disaffection between patients and doctors there, or maybe between doctors and doctors, for such an idea to become law. What a political and medical mess! At least I think so.

You might therefore conclude that I'd be opposed to mandatory health education in the schools. Not so. (I try to avoid sub-cerebral reflexes against the word "mandatory.") In fact, Iowa has a law that requires each school

district to have a K-12 health curriculum. You probably didn't know that — it's almost a secret. But the Iowa Department of Public Instruction, the agency charged with bird-dogging the rules and regulations regarding pre-collegiate education, tries to avoid spelling out curricular details to local school districts (a very wise policy, I think). They've made an effort to nudge the districts very gently toward fulfilling the legal requirement by providing them a carefully developed "curriculum assessment questionnaire." To the extent that a school district is falling down on this job — and I'd bet that all of them are — the answers to the questionnaire should identify the gaps. At least that's a proper first step. The Iowa Parent-Teacher Organization and more recently, the Auxiliary of the Iowa Medical Society have grown interested in trying to promote more and appropriate health instruction across the entire gamut of public education. Just think what an impact a well-developed course should make in favor of life-style choices that foster health and prevention of disease! Smoking, exercise, diet, child abuse, seat belts —

"Iowa has a law that requires each school district to have a K-12 health curriculum. You probably didn't know that — it's almost a secret."

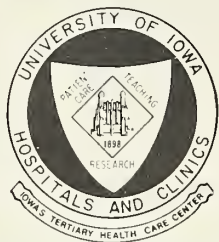
improvement in those behaviors alone could be so incredibly salutary!

Iowa physicians could therefore now take advantage of the "mandatory," but now unenforced, provision of our state law to produce some excellent results. I urge all IMS members, working personally, through county societies, with the Auxiliary chapters, or otherwise, to lend some energy to this mandatory but very useful educational project. For further information, contact Mrs. Marian Weyhrauch in Waterloo (319/233-8771, 405 Ivanhoe Road, Waterloo, Iowa, 50701). The IMS Committee on Health Education is already supportive. Take some action on this. It could well make more long-range difference than any professional action you'll take all year — maybe ever.

Step 1: *Has your own school district responded to the questionnaire?*

Dr. Caplan is Associate Dean for Continuing Medical Education at The University of Iowa College of Medicine.

DRUG THERAPY REVIEW



UNIVERSITY OF IOWA HOSPITALS AND CLINICS

REYNOLD SPECTOR, M.D., Editor

SINGLE-DOSE THERAPY OF SYMPTOMATIC URINARY TRACT INFECTIONS IN WOMEN

CHOOSING APPROPRIATE treatment for women with symptoms suggestive of cystitis is a clinical decision made in most outpatient medical settings on a daily basis. There is an increasing body of medical literature that addresses problems in both the standard diagnostic processes and in the standard therapeutic regimens. This review is meant to address these aspects of urinary tract infections in women and review an alternative treatment approach: single-dose therapy.

EPIDEMIOLOGY

In women with normal genitourinary anatomy, the incidence of symptomatic urinary infection rises from 5% in adolescents to 10 to 20% in women over 60.^{1, 2} The magnitude of

these numbers is made more clear when compared to the incidence in males of less than 1%. The fact that lower urinary tract infections occur almost exclusively in women, and in a great many women, is explained largely by anatomical features. The urethra in the female is short and nonsterile. Another important aspect is the normally alkaline environment of the vagina which allows colonization of coliform organisms from the perineum.³ Moreover, sexual intercourse mechanically promotes migration of organisms into the bladder. Even when bladder invasion of bacteria has occurred, 10 to 20% of women will have complete symptomatic and bacteriologic clearing without treatment.¹ Some sources quote figures as high as 71⁴ to 90%.³

DIAGNOSIS

Once a urinary tract infection has been established, women may complain of symptoms: urgency, frequency, dysuria, and suprapubic, abdominal, or back pain in any combination; or they may be entirely asymptomatic. Patients who present with fever and chills, and leukocytosis in association with bacteriuria and pyuria, should be considered to have an upper tract infection. However, some patients with classical "lower tract symptoms" may, in fact, have an upper tract infection present also.

Conversely urgency, frequency, dysuria, and even pyuria on urinalysis cannot reliably be used to make a diagnosis of a urinary tract infection. Vaginitis and the acute urethral syndrome may also present with similar symptoms.⁵ As many as 30% of patients with these classical features will have negative urine cultures.⁶ The problem of diagnosis of a lower urinary tract infection, then, is a difficult one.

Several clarifying points about treatment pertinent to diagnosis should be made. Firstly, overtreatment of the acute urethral syndrome should be avoided since cultures may be negative.⁷ There is some evidence that the acute urethral syndrome is caused by the presence of less than 10⁵ bacteriuria (so-called "insignificant" and not usually reported).⁸ Therapy may be indicated if pyuria is present. However, prolonged therapy is probably not warranted unless *Chlamydia* is the etiologic agent.⁵ Secondly, an appropriate goal is to design a therapeutic regimen which will relieve symptoms. Failure to treat asymptomatic in-

This information for Iowa physicians is furnished and sponsored by the University of Iowa Hospitals and Clinics.

fections in a normal woman without underlying factors does not lead to renal damage. Therefore, these individuals need not be treated except during pregnancy or when there is a history of repeated symptomatic episodes — situations which tend to predict the development of future symptoms.⁷

UPPER VERSUS LOWER TRACT

If, based on clinical and laboratory features with the above cautions in mind, one concludes that at least a lower urinary tract infection is present, the remaining determination needed is whether an upper tract infection is also present. Several localization studies are available, including invasive methods, such as urethral catheterization and bladder washout and noninvasive tests, such as the c-reactive protein (CRP) and antibody coated bacteria (ACB). The ACB test has received the most attention lately as a very good localization technique; however, false-positives may occur with vaginal or rectal contamination.⁹ False-negatives in acute upper tract infections have ranged from 16 to 38%.⁶ Evidence is accumulating that the patient's response to a single dose of antibiotic may be more predictive of the site of infection than the ACB test, at less cost in both time and money.^{6, 7}

In review, the appropriate steps in making the correct diagnosis in an outpatient female with symptoms suggestive of a lower urinary tract infection can be outlined: (1) Examine the urinalysis for presence of pyuria and bacteriuria, (2) rule out vaginitis, and (3) prescribe a single dose of an appropriate antibiotic. These steps will avoid overtreatment of the acute urethral syndrome, pending culture results. In addition, failure of the single dose to relieve symptoms and/or bacteriuria will identify the presence of an upper tract infection.

TREATMENT

The nature of the differences between an upper tract infection and a lower tract infection serves as the scientific basis for the differences in response to single-dose therapy. There is tissue invasion in the upper tract infection. However, the superficial mucosal infection of the lower tract can be easily reached by the extremely high antimicrobial concentrations achieved. The choice of antibiotic is important. Adequate treatment of 90 to 100% of lower urinary tract infections and/or results equiva-

lent to the standard seven to ten days of therapy have been documented for the following regimes:^{1, 9, 10}

amoxicillin	3 grams	orally
trimethoprim (.48 gms)- sulfamethoxazole (2.4 gms)	6 tablets	orally
kanamycin	.5 gram	intramuscularly

However, a single two-gram intramuscular dose of cephloradine resulted in only 44% cure.¹⁰ A recent report on an oral trial of another cephalosporin, cefaclor, yielded a cure rate of just 79%.⁴

Researchers have suggested that the absolute concentration of the drug achieved in the urine is an important determinant of efficacy.⁹ A high peak concentration for a relatively short period of time may be more important than lower levels for a longer duration. The rate at which an antimicrobial agent reaches its bactericidal effect is also an important pharmacologic feature.

The decision to use single-dose therapy should be based, in addition to clinical factors suggesting lower tract infection already discussed, upon the absence of underlying factors. These include pregnancy, stones, and diabetes mellitus. In addition, women who have delayed seeking treatment for longer than 6 days have been shown less likely to respond to a single-dose regimen.⁶

FOLLOW-UP

Follow-up within 2 or 3 days after treatment should be obtained to document success of treatment. Treatment failures may require a longer treatment course of 10 days when tissue invasion is suspected, or several weeks if a persistent focus of infection is implicated.⁷ Appropriate follow-up of the patient is also based upon an understanding of the terms *reinfection* and *relapse* and their clinical implications.

Reinfection is the recurrence of bacteriuria caused by a different organism or different serotype of the same organism,^{1, 3} as a result of the same normal female anatomic and physiologic features discussed previously. Rarely are there abnormalities of the genitourinary tract contributing to reinfection. Further investigation of these women with studies, such as excretory urography, is not indicated.² Reinfection, if closely spaced, may require several months of treatment.^{3, 7} However,

(Please turn to page 378)

DRUG THERAPY REVIEW

(Continued from page 377)

reinfection at a time remote from the first infection implies the need for retreatment, not necessarily longer or more intensive.¹ Relapse is the appearance of the same bacterial organism, usually within a short time of treatment. If the patient has been compliant with the initial treatment regimen, relapse strongly suggests an underlying cause for infection. It is these women who should be considered for further investigation, including excretory urography. Only approximately 1% of women with lower urinary tract infections will fall into this category.²

ADVANTAGES

Single-dose therapy using an effective antibiotic in women with symptoms suggestive of an uncomplicated lower urinary tract infection has several advantages. Advantages relating to diagnosis and localization have been previously discussed. There are many treatment advantages also, including lower incidence of drug side effects, improved patient compliance, and

lower cost.^{4, 6, 7} In addition, there is less disturbance of the normal flora with single-dose therapy.⁷

In conclusion, single-dose therapy of urinary tract infections in women offers several diagnostic and therapeutic advantages. While not indicated for all infections, its use appears to be indicated in women presenting with symptoms suggestive of an isolated uncomplicated lower urinary tract infection. — ALDA L. KNIGHT, M.D., *Associate in Medicine*

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QUESTIONS/ANSWERS

(Continued from page 361)

creased only 2.3%. (*Am. J. Obstet. Gynecol.* **143**:496, 1982.)

While I do not happen to feel that electronic fetal monitoring is necessary for every patient in labor I do feel its value in high-risk pregnancies has been well demonstrated and the monitoring rate will vary from hospital to hospital depending on the number of high-risk patients delivered. The "ideal" monitoring rate must fall somewhere in between the extremes reported in this study.

If a study such as this is done again in 10 years, would you predict a continuing growth in number of cesarean deliveries? Will vaginal delivery after previous cesarean birth affect total cesarean rates in Iowa?

I find it impossible to predict what will hap-

pen in this regard. It would seem that better technology, such as improved monitoring and scalp PH determination techniques, in association with judicious use of intravenous oxytocin, and the vaginal delivery of some previous cesarean patients, may result in lowering cesarean birth rates in the future. There are approximately 12 areas in the state where the facility and personnel should be available to allow vaginal delivery after previous cesarean birth in those patients who meet the criteria (i.e., vertex presentation, previous low cervical uterine incision and nonrecurrent indication). After fully informing the patients regarding the risks and benefits, some will choose to try for vaginal delivery. I doubt that the number of such patients will be sufficient to have much impact on total cesarean birth rates unless the physicians are rather aggressively urging vaginal delivery. Each physician's philosophy regarding vaginal delivery after cesarean birth and the manner in which he presents this alternative has a great deal of influence on the patient's decision.

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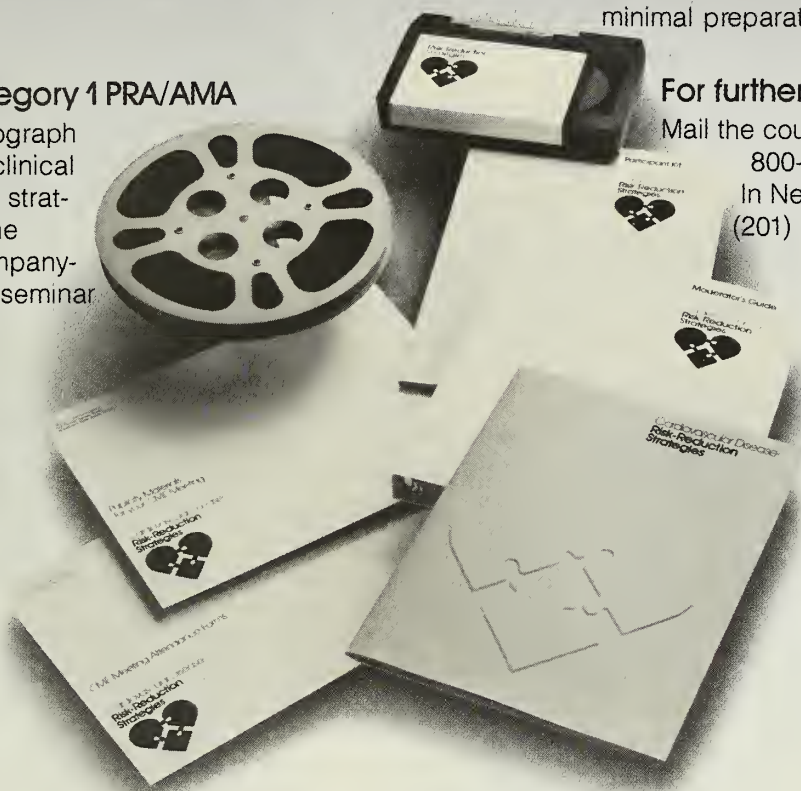
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STATE DEPARTMENT/ PUBLIC HEALTH

SPEAKING OUT ON NURSING HOMES

Following is testimony on nursing home surveying and certification presented in July by State Health Commissioner Norman Pawlewski before the U. S. Senate Special Committee on Aging.

MY NAME is Norman Pawlewski. I am Commissioner of Health for the State of Iowa. I speak for my state today. I also speak for the 56 other chief health officers of the states and territories of this country, the ASTHO (Association of State and Territorial Health Officials). We are unanimous and of one accord. We consider this occasion a mission of utmost consequence and importance. To illustrate more clearly how we see the changes proposed by the Health Care Financing Administration, allow me to use an analogy.

Senators, let's pretend a minute you are the Senate Armed Services Committee and I am chairman of the Joint Chiefs (having been discharged a corporal I like to pretend), and I am here to persuade you I have a great idea for

running the army — an idea that will save huge amounts of money — *a/do/it/yourself army!* Do away with all sergeants!

Men, it's your army and you are going to run it yourselves. Police yourselves, men! See to it that your boots are polished . . . that you exercise . . . run obstacle courses . . . drill . . . pop right out of bed when reveille sounds . . . hold your own inspections . . . don't go AWOL . . . and don't get drunk at the PX. Isn't that great, men? Now, somebody will call you now and then to see how you're doing, and if you are naughty you might get a nasty letter or telephone call telling you to knock it off . . . but, basically, it's YOUR army and we trust that you will do the right thing . . . WITHOUT all those mean old sergeants!

Think of all the money we can save, senators! And you know how long that army will last? About as long as a handful of M & M's with ET! I submit, senators, *that is precisely what will be the fate of the nation's nursing homes, if the federal presence in the control and operation of those facilities is reduced to the level presently proposed!*

I speak to you now from the front-line trenches . . . out where there is mud and rain and wet feet and bad food . . . NOT from the command post. The view is much different down here. *And we're getting ambushed* by our own comrades in arms! The directives from Carolyn Davis are shooting us down! And scaring us to death, I might add! Her idea of saving federal money is to cut out fire inspections by trained fire inspectors. Let the nurses do them, she says. Tell me, senators — what nursing school teaches nurses about fire inspection. That's all we need . . . a big nursing home fire caused by safety violations because some nurse didn't know what to look for. And lacked the competence to evaluate what she saw. The trade-off, in terms of federal funds, is peanuts compared to the potential for headline-making disaster.

I am irresistibly drawn to a remark once made by a contributor to our society who occupied a seat in the U. S. Senate — J. William Fulbright, who said, "we must dare to think about unthinkable things, because when things become 'unthinkable,' thinking stops and action becomes mindless."

I give you an unthinkable, senators: it is unthinkable that we abandon our elderly to the

This information on public health matters is furnished and sponsored by the Iowa State Department of Health.

(Please turn to page 382)

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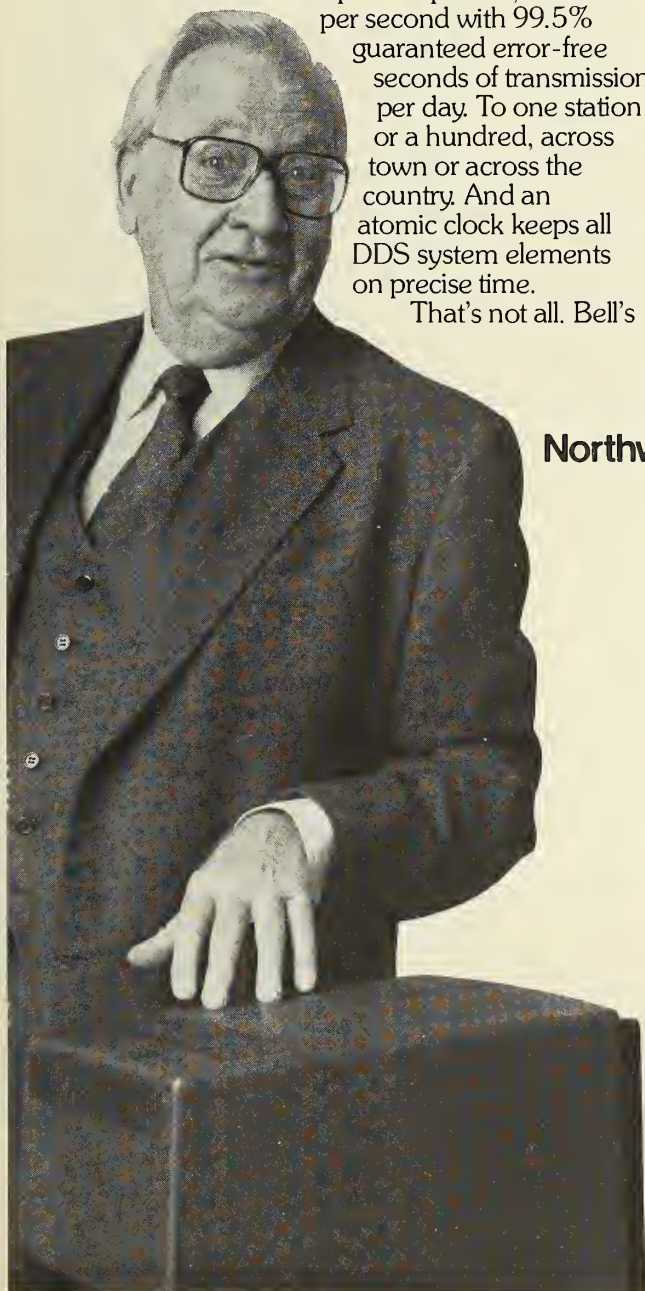
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STATE DEPARTMENT/PUBLIC HEALTH

(Continued from page 380)

vagrant belief that there is an inherent goodness beating in the breasts of men that will propel them to good deeds. And it is delusional to think that the world's dark deeds are the exclusive province of the high and the mighty. One quick look at the front page of *any* newspaper . . . in *any* city . . . in *any* country of the world, today, should quickly relieve you of that erroneous conclusion.

It's not that evil men get together and say "let's open a nursing home so we can abuse elderly people." The abuse comes about one step at a time. Less than 10 years ago we had some real pits in Iowa. Some of them were operated by pillars of respectability in their communities. Church members. Service clubs. Fund drives. Chambers of Commerce. The works. You know the types. One operator was very influential in his political party and was even a close friend of a highly placed elected official. Nobody would believe that this man was capable of operating a degrading, filthy, inhuman hole — *until* they saw the photographs we had taken. Even the official refused to believe it. Until he saw the pictures.

Yes, senators, it could happen again. Take away the funds that prevent such things and you guarantee it will happen again. In the last two years, our Medicare funds have been cut 60%; Medicaid 20%.

On March 20 of this year, Secretary Schweiker announced, "I will not imperil senior citizens in nursing homes — our most vulnerable population — by removing essential federal protection. I will not turn back the clock."

But the directives of the Health Care Financing Administration, of which Carolyn Davis is the administrator, are moving back the hands. And we are going to get chopped to bits if it doesn't stop! In 1974 the federal government stepped in with the necessary muscle — money — and helped us clean up a deplorable situation. That's as it should be. A partnership. A joint effort. After all, the nursing home industry is an industry *created by the federal government* by virtue of Medicare and Medicaid. The states have not created this industry but we do bear the major burden of monitoring, now that it exists.

I'll tell you how to move the hands of the clock backward. With two moves you can shove us back into the dark ages of Long Term Care.

Backward Move No. 1 — The federal proposal to grant so-called deemed status for health-care facilities by JCAH — the Joint Commission of Accreditation of Hospitals, instead of by state agencies. That backward move has more holes in it than a hundred pounds of Swiss cheese! It's like a mother saying to a bunch of hungry kids "I'm going shopping for the day and don't get into the cookie jar." JCAH has no regulatory authority whatsoever. It is without muscle. It could do nothing about violations. JCAH represents nonprofit interests and they, therefore, have no particular incentive to cut costs. Private long-term care facilities are profit-making entities with *strong* incentive to *cut* costs and corners. And cutting corners in most cases means reducing needed services.

Backward Move No. 2 — The federal proposal to put nursing homes on a two-year cycle with no mandatory re-visit. A phone call. Or a letter. Or a Xerox copy of deficiencies, but no re-inspection to see to it that the deficiencies are eliminated. The kids in the cookie jar! Can you imagine what abuses could develop? With a staff turn-over averaging about 50% who would say anything? Who could say anything? The patients? They are at the mercy of their caretakers. The fear of retaliation runs very deep in them. Oh, there are many creative little ways to retaliate against tattletale patients.

This is a joint effort, Senators. The states and the Feds. You can't pull the plug on us. You can't start the ball game and then quit. You give us the muscle. We'll do the work. We are the only ones who can do this properly. We are the only ones who are in there . . . watching out for the welfare of our, no your, elderly. We are the only bulwark between them and the unscrupulous operators who are SURE to surface — and quickly — if you are going to default this game. I can promise you — here and now — if that happens there will be a very heavy price paid by both the state and the federal government. If you think crippling us is going to cut any costs, it is the falsest kind of economy.

In closing, I am borrowing from Sophocles, who said, centuries ago: "You have this good within your hands. Don't lose it!"

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Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, light-headedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdose, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, e.g., excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

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July 1982 Morbidity Report

Disease	July 1982 Total	1982 to Date	1981 to Date	Most July Cases Reported From These Counties
Amebiasis	4	51	5	Adair, Boone, Johnson
Brucellosis	2	3	0	Cedar, O'Brien
Chickenpox	13	5853	6978	Dubuque, Scott
Compyllobacter	50	165		Johnson, Linn, Dubuque
Cytomegalovirus	2	26	13	Jefferson, Muscotine
Eaton's Agent infection	34	141	15	Polk, Linn, Johnson
Encephalitis, virol	5	16	11	Scattered
Erythema infectiosum	0	246	1149	
Gastroenteritis (GIV)	57	7972	12208	Johnson, Block Hawk, Scott
Giardiasis	18	72	24	Polk, Johnson, Des Moines
Hepatitis, A	5	52	162	Linn, Polk, Pottowottomie
Hepatitis, B	5	58	51	Lee, Wayne, Clinton
Hepatitis, Non A-B	1	8		Foyette
Hepatitis type unspecified	2	18	37	Polk, Woodbury
Herpes Simplex	51	231	134	Johnson, Linn, Polk
Herpes Zoster	0	10	4	
Histoplasmosis	0	14	7	
Infectious mononucleosis	0	127	188	
Influenza, lab confirmed	0	73	191	
Influenza-like illness (URI)	548	27224	48551	Johnson, Polo Alto, Block Hawk
Legionellosis	0	16		
Malaria	0	5		
Meningitis aseptic	10	27	34	Polk, Linn
bacterial	7	99	83	Clarke, Johnson, Kossuth
meningococcal	0	5	18	
Mumps	0	29	41	
Pertussis	2	5	2	Pottowottomie
Robies in animals	46	254	566	Story, Sioux, Muscotine
Reye Syndrome	0	4		
Rheumatic fever	0	3	7	
Rocky Mt. Spotted Fever	1	3		Warren
Rubella (German measles)	0	0	4	
Measles	0	0	1	
Solomonellosis	36	172	152	Linn, Polk, Dubuque
Shigellosis	1	22	20	Pottowottomie
Tetanus	1	3		Cerro Gordo
Toxic Shock Syndrome	6	14		Scattered
Tuberculosis total ill	4	48	58	Polk, Winneshiek
bact. pos.	3	36	38	Polk, Winneshiek
Typhoid Fever	0	1		
Venereal diseases: Gonorrhea	405	2673	2969	Polk, Block Hawk, Linn
Syphilis	1	18	14	Block Hawk

Laboratory Virus Diagnosis Without Specified Clinical Syndrome: Guillain-Borre — 1, Polk; Hookworm — 2, Johnson; Ascariasis — 2, Block Hawk, 2, Johnson, 1, Muscotine; Coxsackie — 2, Polk.



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ABOUT IOWA PHYSICIANS

Dr. David S. Dwyer has joined **Drs. Thomas A. Brown** and **Leo J. Plummer** at the Physicians Eye Clinic in West Des Moines. Dr. Dwyer received the M.D. degree at the University of Illinois School of Medicine in Chicago and served his ophthalmology residency at the University of Missouri in Kansas City. . . . **Dr. Mark Hermanson** recently began family practice in Bettendorf. Dr. Hermanson received the M.D. degree at the U. of I. College of Medicine and completed his family practice residency at St. Luke's and Mercy Hospitals in Davenport. . . . **Dr. H. W. Rathe**, retiring Waverly physician, recently was honored by

his co-workers at the Rohlf Memorial Clinic. A plaque was presented to Dr. Rathe and a donation was given to the Waverly Public Library in his honor. . . . **Dr. Douglas J. Jergenson** has joined the Bluff Medical Center in Clinton. Dr. Jergenson received the M.D. degree at the U. of I. College of Medicine and completed his residency in internal medicine at Los Angeles County University of Southern California Medical Center in Los Angeles. . . . **Dr. Jim Buck** recently began family practice in Fairfield. Dr. Buck received the M.D. degree at the University of Minnesota Medical School and completed his family practice residency at Franklin Square Hospital in Baltimore, Maryland.

Dr. Donald L. Skinner joined the McCrary-Rost Clinic in Lake City in July. Dr. Skinner received the M.D. degree at U. of I. College of Medicine and completed his family practice residency at Broadlawns Medical Center in Des Moines. . . . **Dr. Philip M. Schap**, Mason City, was guest speaker at a recent meeting of the Wright County Medical Society. Dr. Schap



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spoke on "Sun-related Conditions of the Skin." . . . **Dr. Donald W. Powers**, Ames, recently was named president-elect of the Iowa Association of Pathologists and **Dr. Peter J. Stephens**, Muscatine, secretary-treasurer. . . . **Dr. Jonathan C. Goldsmith**, associate professor, Department of Internal Medicine, U. of I. College of Medicine, recently was named a fellow of the American College of Physicians. . . . **Dr. Geoffrey Miller** recently joined **Dr. John Bailey** at the Broadway Medical Clinic in Anamosa. Dr. Miller received the M.D. degree at the U. of I. College of Medicine and completed his family practice residency at St. Luke's and Mercy Hospitals in Cedar Rapids.

Dr. Jeffrey J. Goerss recently began family practice at the Spirit Lake Medical Center in Spirit Lake. Dr. Goerss received the M.D. degree at the University of Minnesota Medical School and took his family practice postgraduate work at Broadlawns Medical Center in Des Moines. . . . **Dr. John Brunkhorst**, Waverly, recently was named medical staff president at the Waverly Municipal Hospital. Other officers include **Dr. Michael Berstler**, vice president, and **Dr. David MacMillan**, secretary-treasurer. Both are Waverly physicians.

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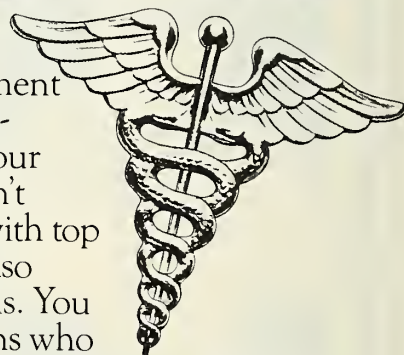
Dr. Joseph F. Galles is the new president of the Linn County Medical Society. Other officers are **Dr. Dale P. Morgan**, president-elect; **Dr. Dean H. Bemus**, vice president; and **Dr. Arno L. Jensen**, secretary-treasurer. All are Cedar Rapids physicians. . . . **Dr. Syed Shah** has joined the staff at the Mental Health Institute in Independence. Dr. Shah received the M.D. degree from the University of Punjab, Pakistan; interned at Nazareth Hospital in Philadelphia, Pa., and served his internal medicine residency at St. Elizabeth Hospital in Elizabeth, New Jersey. . . . **Dr. Lane Reeves**, a Waterloo physician who specializes in infertility and reproduction, recently showed a new camera used in reproductive surgery on the ABC television show "20/20." Dr. Reeves has returned to Waterloo after a year at Johns Hopkins University Hospital in Baltimore, Maryland, where he completed a fellowship in the study of hormone and fertility problems and reproductive surgery. . . . **Dr. Kenneth Jensen**, Clarinda, closed his office June 30 to take a one-year leave of absence. Dr. Jensen cited his health as the reason for the closing. He began his medical practice in Clarinda in 1953. . . .

Dr. Michael J. Welsh, assistant professor, Department of Internal Medicine, U. of I. College of Medicine, and **Dr. Paul S. Williamson**, assistant professor, U. of I. Department of Family Practice, recently received grants from the Cystic Fibrosis Foundation. Dr. Welsh will investigate mechanisms of transport in tracheal epithelium and Dr. Williamson will research electrodermal responses in cystic fibrosis.

Dr. Sabry Mason recently opened a solo practice of surgery in Clarinda. Dr. Mason was born in Egypt and educated in England. He is certified by the American Board of Surgery and the Royal College of Surgery in both Canada and Scotland. Prior to locating in Clarinda, Dr. Mason was in private practice in Florence, Oregon. . . . **Dr. Pat Harrison** recently began family practice in Cherokee. Dr. Harrison occupies the former office of her father, **Dr. M. D. Hayden**. Her mother, Fran Hayden, former IMS Auxiliary president, will be office manager. Prior to locating in Cherokee, Dr. Harrison was in the Student Health Department at the University of Northern Arizona.

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In The Public Interest

IVCCC Use Study Arrives



THE EFFORTS of various Iowa leaders to examine and understand the complexities of health care delivery continue to accelerate. Further backing for this statement came in August with the arrival of a new Iowa hospital utilization study.

On August 17 the Iowa Voluntary Cost Containment Committee (IVCCC) unveiled a study on hospital usage it commissioned in 1981. The study measures further the use made of Iowa hospitals by patients and physicians. The project was directed by John E. Wennberg, M.D., of Dartmouth College, Hanover, New Hampshire, in collaboration with SERVI-SHARE of Iowa. This IVCCC research parallels what Dr. Wennberg has done in Maine, Vermont and Rhode Island.

For background understanding, the IVCCC organizationally is a voluntary enterprise composed of individuals from business, industry, labor, government, insurance, hospitals and medicine. Its work has been spurred by the Iowa Medical Society, Iowa Hospital Association, Blue Cross/Blue Shield and others out of a belief that such an entity is appropriate to address the important issues surrounding the delivery of health care today.

As thought likely, the IVCCC/Wennberg study produced interesting variations within and among sections of Iowa. The findings substantiate what is generally acknowledged, that medicine — whether practiced in North Dakota, Nova Scotia or northwest Iowa — differs in style from place to place, mixing scientific determinations and procedures with an art of medicine that's developed by a practitioner or practitioners in a given area over the years.

This phenomenon is demonstrated in the study, for example, with data showing the number of admissions for tonsillectomies to be several times greater in some areas of the state than in others. Similar variations appeared for prostate surgery, dilation and curettage, varicose vein removal, cataract extraction and

hemorrhoidectomy. By contrast area variations were slight for other common surgical procedures, i.e., appendectomies, hysterectomies, cholecystectomies and hernia repairs.

The IVCCC study tells of other per capita variations in the state which are of consequence — number of beds, hospital personnel and hospital expenditures. For example, among 23 Iowa areas with populations greater than 20,000, per capita hospital expenditures in 1980 ranged from a low of \$107 to a high of \$317. Total hospital admissions varied considerably, from a low of 109 per 1,000 to a high of 238.

This complex array of IVCCC information will facilitate interesting discussion including much obviously within the medical community. By looking thoughtfully at the procedural variations mentioned earlier there should be a professional learning opportunity of considerable value.

As William Bliss, M.D., Ames, IMS past-president and IVCCC co-chair, said last month when the report was released, "We are focusing here on a critical component in the issue of rising health care costs. We have undertaken the study to better understand utilization of Iowa hospitals. Now, with the prospect of the kind of feedback and continuing education program conducted by Dr. Wennberg in New England, our opportunities are significant."

To this end, the IVCCC has okayed referral of the general study (plus data specific to each facility) to the 131 Iowa hospitals surveyed, to the Iowa Medical Society and the Iowa Hospital Association. Study of the data is encouraged to see what the implications are. Hope is that hospital medical staffs and utilization review committees will look at it in depth. Where appropriate, voluntary approaches will be encouraged to change usage patterns to achieve cost savings.

The IVCCC puts it this way: The study will provide hospitals, physicians and others concerned about health care costs in Iowa with data useful in changing utilization patterns to lower overall health care costs.

Where this does not affect quality, let it stand as a fundamental goal.

September 1982

Journal of the Iowa Medical Society



PRESIDENT'S PRIVILEGE

THERE'S MORE THAN COST

AS IT SAYS ABOVE, these comments are the *president's privilege*. Beyond this, however, it is also a privilege for the one holding this office to represent you on frequent occasions.

In my several months as president, I've attended meetings where I have been asked to speak for Iowa medicine. At these several sessions I've heard comments about medical care delivery from conscientious and well-informed individuals who represent a cross-section of occupational endeavor.

The majority of those I've heard speak about medical care have emphasized cost containment and cost control. This is the priority issue (as you would guess). What can be done about it? They seem convinced the structure must be revamped.

Actually, the elements of quality and access are taken pretty much for granted. This is gratifying if indeed most people do accept quality as a given. Our challenge, of course, is to assure its presence. As we must, both personally and as a profession totally, let's keep in mind there are no substitutes for quality, good judgment and integrity.

It was my privilege in early September to

speak for the Iowa Medical Society before the new Legislative Health Care Costs Joint Subcommittee of the Iowa General Assembly. At one point in my comments, I said, "... it is important to state that humanism, the warm and meaningful relationship between physician and patient, is an essential and large part of the practice of medicine."

Change which diminishes this idea of a personal and caring doctor/patient association is a risky matter. We advocate that change in the health care delivery system which is thoughtful and evolutionary and not revolutionary.

I believe this. And I am pleased for the privilege to say it!

Hormoz Rassekh, M.D.
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State Insurance Commissioner Foudree is giving Blue Cross/Blue Shield an additional 90 days to comply with his July directive. His initial order had six parts, the most ambitious of which called for instituting a new hospital payment mechanism. The Blues say they will devise a prospective payment plan within the Commissioner's timeframe. They have secured Dr. Henry Miller of Maryland to consult in the task.

WENNBURG USE STUDY

Educational use of data from the Wennberg hospital utilization study will be encouraged by the IMS Board of Trustees. Study of their specific data by individual hospital medical staffs may be profitable, as may be study of the general report by specialty organizations. The project was undertaken by the Iowa Voluntary Cost Containment Committee.

TO WASHINGTON ON FTC

Society President Hormoz Rassekh, M.D., and President-elect Erling Larson, Jr., M.D., were in Washington, D.C., in September to confer with the Iowa Congressional delegation on legislation pertaining to the Federal Trade Commission. Medicine's goal is to preclude FTC regulation of the professions.

U. OF I. PRESIDENT

Talking to the IMS Executive Council in September, new University of Iowa President James O. Freedman said, "Professional schools relate broadly to the needs and nature of man. They have much relevance to the University and need to be fully integrated into its life." He noted particularly the joint endeavors of the College of Medicine with other units and divisions of the University.

IFMC/BLUE CROSS AGREEMENT

The Iowa Foundation for Medical Care and Blue Cross have agreed the IFMC will continue to review BC subscriber services. The new agreement targets an IFMC goal of 10% fewer days of care per thousand. The 10% bid commences 1/1/83.

NUCLEAR MATTER

The IMS is to follow a watchful course on the issue of nuclear warfare and its medical consequences. So said the Executive Council in September in answer to a bid from Muscatine County to introduce a further resolution on the topic at the fall interim meeting of the AMA House. A June resolution from Iowa asked for creation of an ad hoc committee in the AMA to give further attention by the medical profession to this vital topic. The June resolution was defeated with the thought that appropriate activity is underway.

LEGISLATIVE MATTERS

With one-third to one-half of Iowa's lawmakers being new in 1983, IMS Legislative Chairman Clarence H. Denser, Jr., M.D., told the Executive Council in September some interesting and challenging times are ahead. He said Iowa physicians need to get acquainted with their legislators before the session opens in January; only this way can the Society hope to be effective in its work. The IMS Legislative Committee will review priorities late this month.

IMS DIRECTORY GOING

The 1982-83 IMS Member Directory is being sent this month. The book is a valuable reference tool in physicians' offices and clinics. It contains specialty designations, addresses, telephone numbers, etc.

SHIELD ACTIVITY

Blue Shield Board Chairman E.E. Linder, M.D., told the IMS Executive Council in September additional monitoring of utilization and costs is inevitable. Dr. Linder said the list of out-patient surgical procedures is likely to be expanded. The 72 procedures now designated have been accepted generally by the medical community.

SUNDERBRUCH APPOINTED

As President of the American Association of Foundations for Medical Care, John Sunderbruch, M.D., Davenport, is on an AMA advisory committee to assist in the development of a national health policy. The project, extending to 1984, was approved in June by the AMA House of Delegates. Various private sector organizations will be involved.



Outpatient surgery programs do reduce inpatient hospital days and have the potential to significantly impact health care costs in Iowa.

Blue Cross and Blue Shield of Iowa support outpatient programs when medically appropriate as a means to reduce the cost of health care in our state.

And recent data show trends toward more outpatient surgery in Iowa. In fact, many of the medical and surgical procedures suggested by the Iowa Foundation for Medical Care (IFMC) as

appropriate for an outpatient setting were performed on an outpatient basis last year.

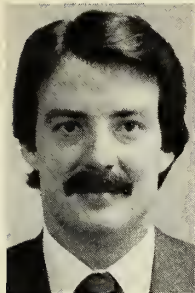
We are encouraged that more physicians and their patients are realizing the benefits of outpatient surgery.

We all need to work to maintain a qualitative, affordable health care delivery system.



**Blue Cross
Blue Shield**

of Iowa



QUESTIONS - ANSWERS

Dennis Solheim
Des Moines, Iowa

SURGERY CENTER OF DES MOINES

While outpatient/same day surgery is available in many Iowa hospitals, the only free-standing facility within our borders is the Surgery Center of Des Moines. It was developed and is operated by a group of anesthesiologists. Its four operating rooms were opened in November 1981. Its administrator, Mr. Dennis Solheim, provides these comments after one year of operation by the Surgery Center.

Please give us a brief explanation of how the Surgery Center is organized and how it operates.

The Surgery Center of Des Moines, Inc., is a free-standing, independently owned and operated ambulatory surgery facility. It has been designed and equipped for the purpose of performing elective surgical procedures. The medical staff is comprised of Des Moines area physicians and surgeons with privileges at local hospitals. Surgery is scheduled at our facility Monday through Friday with cases starting at 7:30 a.m.

Could you provide examples of the procedures which are done most commonly?

The most common procedures include D&C's, excision of cysts and lesions,

orthopedic procedures (arthroscopies), plastic procedures, myringotomies, sterilizations (male and female), breast biopsies and cystoscopies.

Is use of the Center increasing steadily? Is the number of physicians providing services growing? How many procedures can be done in a day?

As physicians become more aware of the efficiencies for themselves and the cost savings to the patients, usage of the Surgery Center will continue to increase. Our approved medical staff now numbers 80. To date, 46 physicians have used our facility. These figures are very pleasing and encouraging to us. Depending on the types of procedures, as many as 40 patients could have surgery in one day.

How has patient acceptance been? Do most seem to like this approach for the type of service they need?

We follow our patient's progress after surgery. By doing so, we have heard many positive comments about their experience at our facility. The most frequent comments are directed to the personal and caring attention of our nursing staff, a thorough explanation of the procedure, home care instructions, family involvement, home-like atmosphere, and general cleanliness of the facility. Patients seem more relaxed about their surgery knowing they will return to their home within a few hours to recuperate.

Is the main goal one of cost containment, and, if so, what is your impression about achieving this goal?

Our main goal is to provide high quality care and, at the same time, a lower cost alternative to the hospital setting. Response to our efforts in cost containment by physicians has been excellent. As the public becomes more aware of health care costs, we are receiving more calls to compare our fees with other alternatives. Therefore, increased consciousness from physicians, business and the public will make achievement of our goal a reality.

(Please turn to page 403)

TEFRA . . . Good News and Bad News!

DAVID E. BLACK, C.F.P.

Des Moines, Iowa

AUGUST 15, 1982 has broken an extended silence from the 1974 ERISA legislation, "no news has been good news." TEFRA stands for Tax Equity and Fiscal Responsibility Act of 1982, but many physicians may soon begin wondering how much "equality" really costs. Most of the bad news becomes effective in 1983 and later, so taxpayers have time to adjust strategies to minimize taxes thereafter. However, the "cost of waiting" is applicable to many existing plans that could take advantage of "old" tax law before 1983. This article will summarize some key changes in the pension area.

BAD NEWS

Top Heavy Plans (faster vesting, higher costs for non-key employees, aggregate limits on multiple plans)

First of all, a top heavy plan is a defined benefit plan where the accumulated accrued benefits under the plan for "key employees" exceed 60% of the present value of the accrued benefits. This is applicable to all employees with combined or defined contribution plans where more than 60% of the sum of the account balances are attributable to key employees. Key employees include officers and shareholders with more than 5% ownership and a salary of more than \$150,000. The new set of rules for such plans include requirements for accelerated vesting (a choice of 100% after 3 years or a 6 year graded schedule). Only compensation up to \$200,000 can be taken into

account in determining benefits for a top heavy plan with cost of living adjustments geared to Social Security rather than Consumer Price Index. This will create a "trickle down effect" to lower paid employees as employers lower contributions in accordance with a new \$30,000 limit. Additionally, top heavy plans cannot count Social Security benefits or the OASDI portion of FICA taxes paid on behalf of employees. Minimum benefits/contributions are required for non-key employees and subsequently bumped another percentage point if the employer wants to avail of aggregate limits on multiple plans (i.e., defined benefit and defined contribution combination programs). Loss of tax qualified status will result to those who do not adopt the top heavy provisions.

Anti-Keller Provision

Basically, this section was designed to overturn *Keller v. Commissioner* (77TC1014) and will allow the Secretary of Treasury to impose taxes on certain owner-employees of personal service corporations despite their corporate form. The secretary may allocate all income, deductions, credits, exclusions, etc., of owner-employees (defined as those who owned more than 10% of outstanding stock) if the corporate form was adopted for the principal purpose of evading or avoiding income tax by securing tax benefits that would not otherwise be available. Transitional rules are provided for those corporations wishing to liquidate during 1983 or 1984 without the risk of incurring tax on unrealized receivables. Many typical professional corporations may want to become partnerships or self-employed individuals again with a carefully planned Keogh.

Other Significant Changes

Starting in 1983, IRC Sec. 415 limits on de-

David Black is a certified financial planner (CFP) who has recently joined The Prouty Company as Vice-President to work with professionals in the areas of qualified retirement plans and personal tax sheltering programs.

defined benefit plans are reduced from \$136,425 to \$90,000 and on defined contribution plans from \$45,475 to \$30,000 (or 25% of compensation). Essentially there is a freeze until January 1, 1986 at this level. Further increases are geared to a cost of living factor based on Social Security rather than the Consumer Price Index. It appears no further accruals beyond the new limitation will be permitted until the new Act's limits exceed the accrued benefit.

The common practice of using age 55 retirement to balloon contributions is eliminated as actuarial adjustment is necessary for any retirement age under 62. The often used 140% rule for the aggregate limit for an employee who participates in both a defined benefit and a defined contribution plan is decreased to 125% in most cases.

The new general rule for loans exceeding the new maximum from a qualified plan states they will be treated as distributions, so they are now subject to income taxation. A 5 year repayment rule is established, with the exception of home loans for construction or substantial rehabilitation of a dwelling. The lesser of \$50,000 or 50% of the current nonforfeitable accrued benefit limit is established as the aggregate limit for loans.

The estate tax exclusion has been reduced from "unlimited" to only \$100,000 on the amount paid from qualified plans, deferred annuities, or IRA accounts. Doctors without the opportunity of using a marital deduction need to be aware of this, especially.

New withholding, reporting and record keeping requirements have also been estab-

lished for pensions, annuities, and certain deferred income, which make professional pension administration and plan design more important than ever.

SOME GOOD NEWS!

New regulations will prescribe *post* age 65 retirement benefit increases that will be allowed where no dollar limit excess was permitted in the past.

Keogh plan contributions are now subject to overall Sec. 415 limits (\$30,000 for defined contribution and \$90,000 for defined benefit plan) and "employees" include self-employed. The use of integration formulas may be available to lower costs of non-owner employees. Keogh plans will no longer be required to have banks (or other approved financial institutions) as trustees/custodians. The employer can now serve as trustee of the plan.

The "entire" distribution rule for IRA-to-IRA and IRA-to-qualified plan rollover is eliminated so that "partial" rollovers of IRA distribution are allowed.

SUMMARY

The old adage of "nothing is so sure as death and taxes" remains relevant, but additionally we have all been reassured that "change" is also ultimately unavoidable in effective qualified plan design. A "word to the wise" is sufficient to those physicians who want to maintain or expand their tax sheltering alternatives. As funding limits become effective, the importance of better rate of return on pension assets is accentuated.

QUESTIONS/ANSWERS

(Continued from page 401)

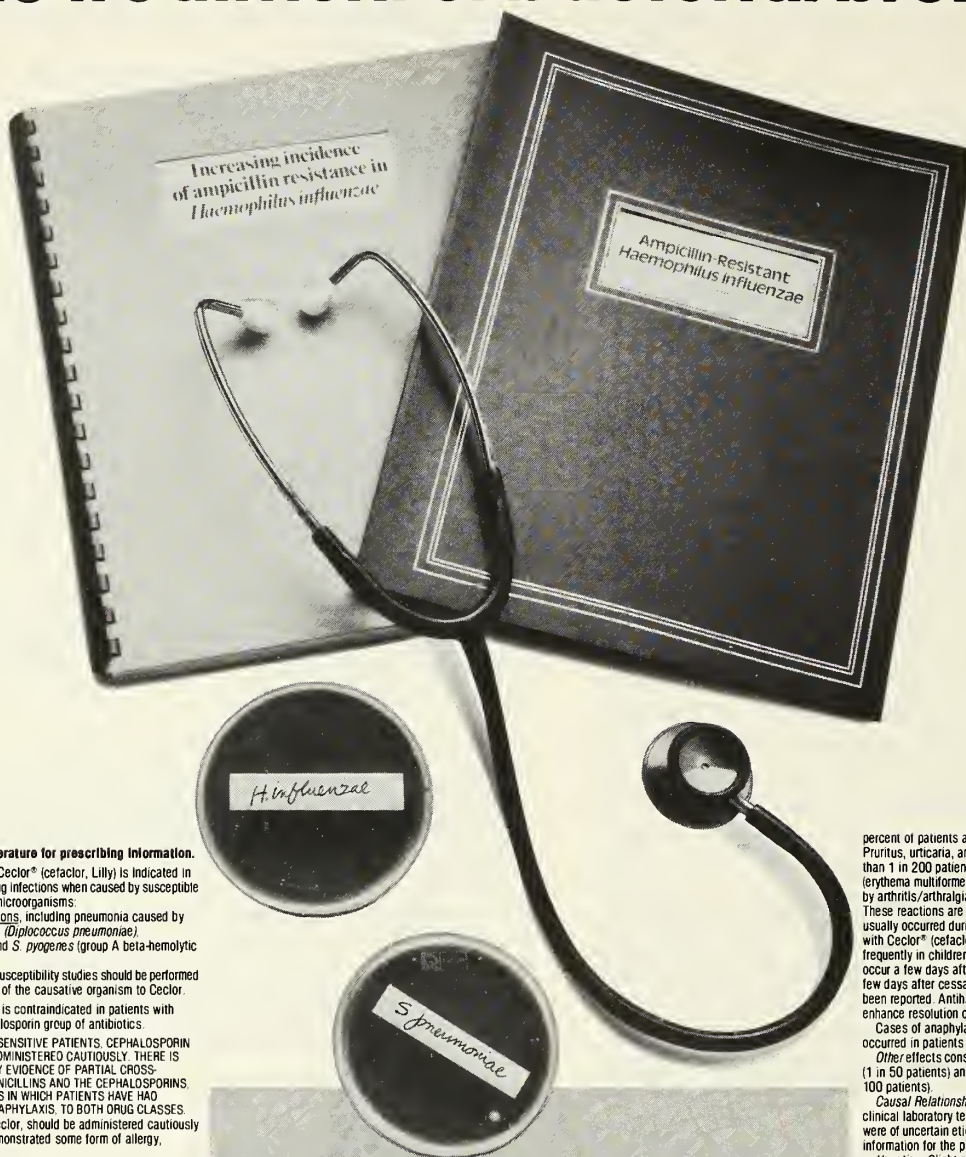
How would you characterize physician understanding and acceptance of the program?

Basically, physician understanding is quite good. Our denial of Blue Cross coverage by the insurance commissioner has created some confusion regarding reimbursements. Physicians are reimbursed no differently than if the proce-

dure was performed at a hospital. The Surgery Center of Des Moines, as a facility, is reimbursed under major medical by Blue Shield, subject to the individual's deductible and coinsurance. Once this was explained to them, acceptance began to increase.

Physicians find their cases handled in a timely and efficient manner; the necessary equipment, instruments and supplies available; a well-trained, competent nursing staff and a more relaxed environment. These factors have been instrumental in continued acceptance and support.

An added complication... in the treatment of bacterial bronchitis*



Brief Summary.

Consult the package literature for prescribing information. **Indications and Usage:** Cefclor® (cefclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae* (*Diphtheria pneumoniae*), *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci).

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Cefclor.

Contraindication: Cefclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES. Antibiotics, including Cefclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

Cefclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Cefclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinistix® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established.

Adverse Reactions: Adverse effects considered related to cefclor therapy are uncommon and are listed below:

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Cefclor.

Hypersensitivity reactions have been reported in about 1.5

Some ampicillin-resistant strains of *Haemophilus influenzae*—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Cefclor.¹⁻⁵

In clinical trials, patients with bacterial bronchitis due to susceptible strains of *Streptococcus pneumoniae*, *H. influenzae*, *S. pyogenes* (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Cefclor.⁷

Cefclor®

cefclor

Pulvules®, 250 and 500 mg

percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Cefclor® (cefclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician:

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). (100281R)

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.⁸

Note: Cefclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285. Eli Lilly Industries, Inc. Carolina, Puerto Rico 00630

Acute Torsion Of the Gallbladder

SHIONG S. LEE, M.D. and KI T. SONG, M.D.

Mason City, Iowa

THE FIRST CASE of torsion of the gallbladder reported in the English literature was by Wendel in 1898.¹ In the past 10 years approximately 590 cholecystectomies have been performed at our community hospital; yet only one case of acute torsion of gallbladder has been encountered. We report this unusual case to increase the commonwealth of knowledge and awareness of this condition.

CASE REPORT

A 90-year-old white woman was admitted in November 1981 with the chief complaint of abdominal pain in the right upper quadrant for 36 hours. The pain was described as steady and radiating to the right shoulder and back. Intermittent nausea and vomiting were also noted. She was known to have gallstones for years based on a cholecystogram done at the other hospital. However, there was no previous surgery.

The authors are associated with the North Iowa Medical Center in Mason City, Iowa.

This short case report demonstrates only one of 590 cholecystectomies over a decade to have presented with acute torsion of the gallbladder. The elderly patient proceeded well through surgery.

On admission, her temperature was 97.8° F., pulse 76/min., respiration 19/min., BP: 148/68 mmHg, and she was mentally alert. The heart was normal in size with regular rhythm and without murmur. The EKG showed only slurring of ST segment with mild depression of T wave. Muscle guarding and rebounding tenderness were noted extending from the right upper to the lower abdomen. Bowel sound was present and plain abdominal x-ray film was essentially negative. Laboratory investigations disclosed WBC: 16,400/cumm with Segs: 88%, Bands: 3%, Lymphs: 9%, RBC: 4.98M, Hct: 39.2%, Hgb: 13.4gm/dl, platelets: 293×10^3 /cumm. The chemistry values were all within normal limits including total serum bilirubin: 0.6 mg/dl, Amylase: 28 IU/L, Alk-P-tase: 77 IU/L. The urinalysis was also normal. Under the impression of acute cholecystitis with localized peritonitis, an exploratory laparotomy was performed. The gallbladder was found to be markedly distended and twisted one and half turns clockwise (Figure 1). Exter-

(Please turn to page 406)

THE IOWA MEDICAL FOUNDATION HAS DESIGNATED THIS ARTICLE AS THE HENRY ALBERT
SCIENTIFIC PRESENTATION FOR THE MONTH OF OCTOBER 1982



Figure 1. Note the clockwise torsion and acute gangrenous change of the gallbladder.

nally, the gallbladder was uniformly hemorrhagic and murky purple in color. Several stones ranging from 1 to 2 cm were palpable in its cavity. Cholecystectomy and operative cholangiogram were carried out to assure no stone remained in the common bile duct. Post-operatively, the patient made an uneventful recovery and was discharged 10 days later. The pathologic study of the gallbladder revealed acute infarction of the entire wall superimposed on chronic cholecystitis with cholelithiasis.

COMMENT

Acute torsion of the gallbladder is a rare entity. Although sporadic cases have been reported^{2, 3, 4, 5} after the first documented case by Wendel,¹ this condition remains a medical curiosity. Clinical diagnosis is difficult but is possible preoperatively if this condition is kept

in mind. According to previous experience, the age of patient is of no significance. Just as the cholecystitis and cholelithiasis have been seen in all age groups from teenagers to late octogenarians, so torsion can occur at any age; however, many of the reported cases are in elderly patients such as the case reported here.

As a corollary of pathologic mechanism, the inevitable sequelae to torsion of the gallbladder are infarction, gangrene, and then perforation. Consequent bile peritonitis and its attendant high mortality can be expected.⁶ That perforation of gallbladder is not commonly recorded is certainly due to early exploratory laparotomy for the acute abdomen. Our case was also diagnosed at emergency laparotomy. What makes this patient more unusual is the association of chronic cholecystitis with cholelithiasis, since chronic inflammation and fibrosis are thought to render less mobility than otherwise normal gallbladder.

It is a general consensus that emergency cholecystectomy is the treatment of choice and little complication can be expected.

SUMMARY

A case of acute torsion of the gallbladder superimposed on chronic cholecystitis and cholelithiasis is reported. The clinical picture is similar to an acute cholecystitis or biliary colic. Diagnosis was made at exploratory laparotomy. Cholecystectomy was performed and patient recovered uneventfully.

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SCIENTIFIC/SKI MEETING

The Northwestern Medical Association convenes for its 36th Annual Meeting at Sun Valley, Idaho, from February 7-11, 1983. Transplants-implants, general medical subjects, ski-injury prevention, high altitude physiology and financial planning will be discussed by experts. Approved for 10 CME Category I credits. Registration 3 to 5 p.m. on February 7, Challenger Inn, Sun Valley. Non-members registration \$100. For information write to Norman Christensen, M.D., 2456 Buhne Street, Eureka, California 95501 or phone 707/443-2248.

Cancer Mortality Excess In Counties of Iowa

JOHN S. NEUBERGER, Dr. P.H.
Kansas City, Kansas

RECENT STUDIES by Mason *et al*^{1, 2} determined age adjusted cancer mortality rates for the contiguous U. S. for the period 1950-1969. Variations in cancer mortality by geographic location were quite striking. Color coded maps were used to identify cancer mortality "hot spots," and to encourage the investigation of specific cancers in counties with excessively high rates.

During 1950-1969 cancer mortality rates in Iowa were significantly elevated for a number of sites. For example, prostate cancer in white males was elevated in Humboldt, Ringgold, Kossuth, Lucas, Winnebago, Jasper, Floyd, Hamilton, Clayton and Clinton counties. Colon cancer in white males was elevated in Lee and Lyon counties. Breast cancer in white females was elevated in Dubuque and Crawford counties. Colon cancer in white females was elevated in Lee, Clinton, O'Brien, Madison, and Clarke counties. Lung cancer in white males was significantly elevated but not in the top 10% of rates (considering the U. S. as a whole) in Polk County.

This paper presents the highlights of recalculating the cancer mortality rates in Iowa for a more recent time period. The principal aim is to assess which cancer sites and counties remained consistently significantly high.

Dr. Neuberger is an assistant professor in the Department of Community Health, University of Kansas School of Medicine, Kansas City, Kansas.

This analysis of cancer mortality for white residents of Iowa was completed for 99 counties and 12 county groups for the periods 1968-1972 and 1973-1977. Comparison was made to previously published results (NCI, 1950-1969). Sixteen cancer sites were evaluated by county and 21 cancer sites were evaluated by county group. Data was age adjusted using the total 1960 U. S. population as the standard. Cancers significantly high in both time periods include colon cancer in females in Lee County and breast cancer in females in Dubuque County. Prostate cancer is not significantly elevated in the same counties as previously. Lung cancer is now significantly elevated in males in Polk County.

MATERIALS AND METHODS

Cancer mortality rates were calculated for 16 cancer sites for each of the 99 counties in Iowa and for 21 cancer sites for each of the 12 county groups. These county groups are the same as the U. S. Bureau of Economic Analysis' State Economic Areas (SEA's); namely, one county or a group of contiguous counties with similar economic and social characteristics (see Appendix Table A1). The basis for grouping sites according to either individual county or county group was to provide consistency with the 1950-1969 study by Mason *et al*. The same boundaries were used for county groups as in Mason's study.

The data was restricted to white male and female residents of Iowa. Age, sex, and race specific mortality rates were calculated using 18 age categories (0-4, 5-9 . . . 75-79, 80-84, and 85 and over). The population chosen for the denominator of the specific rates was obtained either from the 1970 U. S. Census (for the 1968-

TABLE A1
LISTING OF COUNTY GROUPS, INCLUDING FEDERAL COUNTY
IDENTIFICATION CODES, IOWA

1. Black Hawk (013)
2. Linn (113)
3. Scott (163)
4. Polk (153)
5. Woodbury (193)
6. Pottawottomie (155)
7. Dubuque (061), Jones (105), Jackson (097), Clinton (045), Cedar (031), Johnson (103), Muscotine (139), Louisa (115), Des Moines (057), Lee (111)
8. Grundy (075), Marshall (127), Tomo (171), Benton (011), Jasper (099), Poweshiek (157), Iowa (095), Mahosko (123), Keokuk (107), Woshington (183), Henry (087)
9. Winnebago (189), Worth (195), Mitchell (131), Howard (089), Winneshie (191), Allomokee (005), Cerro Gordo (033), Floyd (067), Chickosow (037), Butler (023), Bremer (017), Foyette (065), Cloyton (043), Buchonon (019), Delowore (055)
10. Lyon (119), Sioux (167), O'Brien (141), Plymouth (149), Cherokee (035), Bueno Visto (021), Ido (093), Soc (161), Monono (133), Crawford (047), Corroll (027), Horison (085), Shelby (165), Audubon (009), Coss (029), Mills (129), Montgomery (137), Fremont (071), Page (145)
11. Osceolo (143), Dickinson (059), Emmet (063), Cloy (041), Palo Alto (147), Kossuth (109), Honcock (081), Pocahontas (151), Humboldt (091), Wright (197), Franklin (069), Colhoun (025), Webster (187), Hamilton (079), Hordin (083), Greene (073), Boone (015), Story (169), Dollos (049)
12. Guthrie (077), Adoir (001), Modison (121), Worren (181), Morion (125), Adams (003), Union (175), Clorke (039), Lucos (117), Monroe (135), Wopello (179), Jefferson (101), Taylor (173), Ringgold (159), Decotur (053), Wayne (185), Apponoose (007), Davis (051), Von Buren (177)

1972 deaths) or from a 1975 U. S. census bureau estimate (for the 1973-1977 deaths) made available by the National Cancer Institute. The 3 digit death coding format for underlying cause of death was based on the International Classification of Diseases Adapted for Use in the United States, Eighth Revision (ICDA-8),³ after checking for comparability with ICD-6 used by Mason *et al.*

Age adjusted mortality rates were calculated using the direct method, applying age, sex, and site specific county and county group rates to the total 1960 U. S. population (all races, sex specific). Rates were rank ordered for each county or county group for each ICDA code number. If the rate for a county (or county group) minus two standard deviations did not overlap with the state rate plus two standard deviations, a statistically significant ($p < 0.05$) elevated rate was indicated. The method used was generally the same as that of Mason.

For each county and county group, compari-

sons were made to the 1960 age adjusted U. S. rate using 1973-1977 deaths. Standard deviations for the 1973-1977 U. S. mortality rates are not yet available. Hence, state standard deviations were used as a substitute for U. S. standard deviations when comparison was made to elevated county or county group rates.

Counties with elevated rates in 1950-1969 were compared with the results for 1968-1972 and 1973-1977 to see if they remained consistently high for the same cancers.

RESULTS

The consistently significantly elevated (and in the top 10% of rates nationally in 1950-1969) findings for Iowa are: total cancer in males in Dubuque and Polk counties, total cancer in females in Dubuque County, colon cancer in females in Lee County (46 cases; rate elevated 85%), and breast cancer in females in Dubuque County (106 cases; rate elevated 52%). From

TABLE A2
NON-SIGNIFICANTLY ELEVATED CANCER SITES IN IOWA

Sex	Site	County or County Group (SEA)	1973-77 Ratio of Mortality Rates (age adjusted, all races, sex specific) County/U.S.
Male	Stomach	Sioux	1.61 (10)*
		Lee	1.01 (22)
	Liver	Crowford	1.29 (3)
	Prostate	Ringgold	1.92 (10)
		Winnebago	1.30 (11)
		Jasper	1.06 (20)
		SEA 12	1.40 (2)
		SEA 11	1.44 (44)
	Lip	SEA 1	1.18 (29)
	Multiple Myeloma	SEA 6	1.16 (21)
		SEA 7	1.05 (92)
	Leukemia	SEA 4	2.03 (12)
		SEA 10	1.40 (9)
		Scott	1.05 (539)
	Testis	Clinton	1.10 (34)
		Clorke	1.58 (12)
Female	Total	Monroe	1.13 (1)
	Colon	Crowford	1.28 (18)
		Clinton	1.38 (20)
	Liver	Dubuque	1.53 (34)
	Breast	Cloy	1.28 (8)
	Ovary	SEA 12	1.40 (2)
		Nosophorynx	
		Lymphosarcoma & reticulosarcoma	
		SEA 4	1.27 (44)

* Numbers in parentheses refer to the frequency of deaths during 1973-1977 in each county or county group.

1968-1977, there were 79 colon cancer deaths in female residents of Lee County. Cancer of the prostate, which was significantly elevated in 10 Iowa counties in 1950-1969, is no longer significantly in excess at the county level. When the state is considered as a whole, prostate cancer (rate elevated 12%) and female colon cancer (rate elevated 11%) are now significantly elevated over the U. S. rate..

Prostate cancer is still elevated, though not significantly so, in 3 counties (see Table A2). These include Ringgold, Winnebago, and Jasper counties. The latest rate in Ringgold County is 92% above the U. S. average but is based on only 10 cases from 1973-1977. Colon cancer for males in Lee County is non-significantly elevated by 1 percent. For females, colon cancer is non-significantly elevated in Clinton and Clarke counties.

Certain cancer sites have increased in 1973-1977 to become statistically significantly elevated where previously they were not. These can be found in Table A3. Colon cancer is increased in Franklin (males) and Dubuque (females) counties, for example. Excesses in male bladder cancer in Wright and Hardin counties and prostate cancer in Ida County are also shown.

Lung cancer in males in Polk County was significantly elevated but not in the top 10% of rates during 1950-1969 and was also significantly elevated above the U. S. average in 1973-

TABLE A3
NEWLY SIGNIFICANTLY ELEVATED CANCER SITES IN IOWA

Sex	Site	County or County Group (SEA)	1973-1977 Ratio of Mortality Rates (age adjusted, all races, sex specific) County/U.S.
Male	Bladder	Franklin	2.20 (19)*
		Wright	3.13 (12)
		Hardin	2.41 (13)
Female	Prostate	Ida	2.28 (16)
	Colon	Dubuque	1.59 (78)

* Numbers in parentheses refer to the frequency of deaths during 1973-1977 in each county or county group.

1977. The rate now exceeds the U. S. average by about 17%. Tables 1 and 2 show lung cancer mortality trends for selected Iowa counties for males and females, respectively. The 1973-1977 rate for males in Dubuque County actually exceeds that for Polk County but it is not statistically significantly elevated due to the relatively small number of deaths. The overall rate for the state is less than that for the U. S., but the rate of increase for males for the state exceeds that for the U. S. For females, however, the absolute rate and the rate of increase is less than for the U. S. as a whole. The rate of increase in female lung cancer in Polk County also exceeds that of the state.

TABLE 1
AGE ADJUSTED^a LUNG CANCER^b RATES IN SELECTED IOWA COUNTIES FOR WHITE MALES: 1950-1969, 1968-1972, AND 1973-1977

County of Residence	1950-1969		1968-1972		1973-1977		Percent Change in the Average Annual Death Rate Over 15 Years
	Number of Deaths	Average Annual Death Rate Per 100,000	Number of Deaths	Average Annual Death Rate Per 100,000	Number of Deaths	Average Annual Death Rate Per 100,000	
Polk	987	43.2*	346	58.4	442	72.9*	68.8
Dubuque	267	38.6	125	69.0	139	73.2	89.6
Linn	453	37.2	194	59.8	228	67.6	81.7
Pottawottomie	315	40.7	134	66.5	141	69.1	69.8
Woodbury	383	34.5	122	45.5	171	64.2	86.1
Black Hawk	310	31.0	119	44.3	188	66.7	115.2
Scott	392	35.6	186	62.0	206	67.4	89.3
State	8,568	29.2	3,611	48.4	4,298	57.1	95.5
U. S.	571,226	38.0	N/A	N/A	285,127	62.3	63.9

^a Total 1960 U. S. population (all races and both sexes combined).

^b 8th Revision ICDA: Code 162.

6th Revision ICD: Code 162, 163.

* County rate significantly elevated ($p < 0.05$) above U. S. rate.

N/A Not Available

DISCUSSION

The only consistently high statistically significant (and in the top 10% of rates nationally in 1950-1969) mortality rates found in Iowa during both 1950-1969 and 1968-1977 are total cancer in white males in Dubuque and Polk counties, total cancer in females in Dubuque County, colon cancer in females in Lee County, and breast cancer in females in Dubuque County.

Possible risk factors among whites for colon cancer (other than increasing age) include (Fraumeni)⁴: foods low in fiber and high in animal protein and fat, nitrosamines, ulcerative colitis, vitamin A deficiency, familial multiple adenomatous polyposis coli, hereditary non-polyposis coli (cancer family syndrome), and hereditary site specific colon cancer. Immigrants from Ireland may be at a higher risk.

Possible risk factors for female breast cancer include: obesity, familial or personal history of breast cancer, menstrual onset before age 10, menopause after age 50, high socioeconomic status, ionizing radiation, first full term pregnancy over age 30, nulliparity, and benign breast disease.

Unlike the 1950-1969 NCI study, this investigation used Code 162 for lung cancer, and did not include Code 163. Code 163 is unspecified as to primary or secondary site in the 6th revision.

There is good comparability in death certificate coding for primary site lung cancer between the time periods studied. The population used herein was that measured in 1970 and estimated for 1975, not the sum of the 20 year's population used by NCI. The principal method of age adjustment used herein was sex specific, although when comparison was made to Mason's data both sexes were combined.

It would be useful to obtain the 1973-1977 cancer rates needed to qualify each site to be in the top 10% nationally. Although such rates have been calculated herein for Iowa, they are not readily available for the entire U. S. The acquisition of national standard deviations for the period 1973-1977 would also be desirable. The use of Iowa's state standard deviation as a substitute may create false negatives.

The approach used in this study to find statistically significant elevation by site is a conservative one. Cancer sites remaining statistically significant in both time periods ($p < 0.05$ in both 1950-1969 and 1973-1977 equals $p < 0.05^2$, or $p < 0.0025$) are considered to be of highest priority for further investigation. However, this method is probably not the most useful one for identifying excesses of the rarest tumors since deaths over a 5 year period may yield too few cases in a given county or county group, resulting in a large standard deviation.

TABLE 2
AGE ADJUSTED^a LUNG CANCER^b RATES IN SELECTED IOWA COUNTIES FOR WHITE FEMALES: 1950-1969, 1968-1972, AND 1973-1977

County of Residence	1950-1969		1968-1972		1973-1977		Percent Change in the Average Annual Death Rate Over 15 Years
	Number of Deaths	Average Annual Death Rate Per 100,000	Number of Deaths	Average Annual Death Rate Per 100,000	Number of Deaths	Average Annual Death Rate Per 100,000	
Polk	156	5.5	74	9.5	134	16.5	200.0
Dubuque	46	5.3	18	7.1	29	10.5	98.1
Linn	69	4.7	41	9.9	53	12.2	159.6
Pottawattamie	52	6.2	27	11.3	36	15.3	146.8
Woodbury	74	5.9	35	11.4	40	12.0	103.4
Black Hawk	55	4.8	29	8.8	52	14.5	202.1
Scott	65	5.1	39	10.5	59	15.8	209.8
State	1,571	4.7	726	8.0	962	10.4	121.3
U. S.	108,326	6.3	N/A	N/A	86,455	15.2	141.3

^a Total 1960 U. S. population (all races and both sexes combined).

^b 8th Revision ICDA: Code 162.

6th Revision ICD: Code 162, 163.

N/A Not Available

One might question the degree to which a cancer mortality rate excess in a specific county is a reliable indicator of an incidence rate excess for the same cancer in the same county. Incidence data is preferred because it is a better measure of risk than mortality, particularly for cancers with a low case fatality rate. In a separate study utilizing the State Health Registry of Iowa, comparisons of excess mortality with excess incidence data in Iowa revealed some congruence for lung, colon, and total cancer, but not for female breast cancer or prostate cancer.

ACKNOWLEDGEMENT

This project was supported in part by the Mid-America Cancer Center at the University of Kansas School of Medicine, the American Cancer Society (Grant #IN115), and the U. S. Environmental Protection Agency, Region VII

(Contract #KO575NTEX). Thomas J. Mason, Ph.D., Head, Population Studies Section, Environmental Epidemiology Branch, National Cancer Institute, provided mortality data for 1950-1969 and population data for 1970-1975. Iowa mortality data for 1968-1977 were provided by Leon F. Burmeister, Ph.D., Associate Professor of Biostatistics, Department of Preventive Medicine and Environmental Health, College of Medicine, University of Iowa.

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9:15- 9:45	"Coronary Angioplasty — Role in Ischemic Heart Disease"	3:00- 3:30	3. Echocardiograms.
9:45-10:00	Coffee Break		4. Holter monitoring.
10:00-10:45	"Coronary Artery Disease, operate or medicate?"	3:30- 4:15	5. Exercise Testing.
10:45-11:30	"New Concepts in Hypertension and Antihypertensive Therapy"	4:15- 5:00	Coffee Break and Demonstrations
11:30-12:00	Break		"New Aspects of Management of Acute Myocardial Infarctions"
12:00- 1:00	Grand Rounds: "Cardiac Transplantation"	5:00	"Post-operative Care and Followup of the Patient after Cardiac Surgery"
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An Orthopaedic Solution To Thumbsucking

MARWAN A. WEHBÉ, M.D.

Philadelphia, Pennsylvania

ANY PHYSICIAN or parent who has had to deal with thumbsucking knows the frustration it can generate, for both child and parents. Various treatment forms are used, including chemical paints, elbow splints, mittens and dental bracing. This report describes one approach that has been successful.

CASE HISTORY

R. H. Z. is a 3-year-old white male. He has sucked the thumb of his dominant hand since age 6 months. He is described as shy and resorts to thumbsucking the greater part of the day and night. This has resulted in gross malalignment of his teeth, with excoriation and callus formation, as well as a nail deformity of the involved thumb. Soon after his third birthday, he expresses some interest in breaking this habit but is unable to do so. A short thumb spica is applied using plaster-of-Paris (Figure 1). The cast becomes a source of pride because the child is able to draw pictures on it and show it to his friends. At 2 weeks, the cast is removed and a thumb splint (Figure 2) is used at night and for naps for an additional 2 weeks.

During these 4 weeks the child's thumb heals. The alignment of his teeth corrects spontaneously. He becomes more talkative and his speech improves a great deal. He also becomes

Various treatment approaches are tried to break the thumbsucking habit. This short article describes the use of cast which served not only to deter access to the thumb, but also afforded some beneficial psychological return.

more playful, and his activity level increases in contrast to quiet thumbsucking. Twelve months post-treatment, he still does not seem to be tempted to suck his thumb at bedtime, or even at times of frustration or fatigue.

(Please turn to page 413)



Figure 1. The short thumb spica extends to the tip of the thumb. It extends less than two inches proximally and leaves all finger MP joints free.

The author was associated with the Department of Orthopaedic Surgery at the University of Iowa College of Medicine when this paper was prepared. He is now affiliated with the Hand Rehabilitation Center, Ltd., in Philadelphia.



Figure 2. The Mallet-finger plastic splint is held in place with a small strip of adhesive tape over the thumbnail.

DISCUSSION

Theories about the etiology of thumbsucking are legion. Similarly, a great number of ill-effects have been attributed to thumbsucking, some imaginary and some real. The need for any treatment is therefore subject to question. The controversy, however, is beyond the scope of this report.

The treatment described here is simple, nonaggressive and inexpensive. A key factor is felt to be the acceptance of the cast by the child. The role of the physician and the family in this respect cannot be overemphasized. The cast is small and does not limit wrist or finger motion to any extent. The thumb splint serves as a reminder at times of high temptation in the "weaning period," and can be removed by the child himself when he so wishes.

The substantial benefits that followed treatment of this child prompted this short paper. Success with this method may not always be as dramatic. It is offered as an alternative to the traditional methods of treating thumbsucking. Its merits can be established only through repeated trials by those physicians who have patients with this problem.

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COMMENTING EDITORIALLY

MARION E. ALBERTS, M.D.
SCIENTIFIC EDITOR

LEARNING CAN BE FUN

A fool despiseth his father's instruction; but he that regardeth reproof is prudent. — PROVERBS 15:5.

EACH DAY the mail brings another, or several, announcements of continuing education meetings. These enticing offerings come from hospitals and medical teaching facilities far and wide. In many instances there is an associated and exotic vacation, maybe a cruise to some far off place. If a physician were to accept each invitation there would be no time to practice medicine. It is necessary to be selective. The question arises as to what is the most important aspect of the whole scheme. Is the emphasis on a delightful vacation? Or is the event truly an educational venture of high caliber discounting the location?

Benjamin Franklin stated that "an investment in knowledge always pays the best interest." Our professional schedule is highly demanding. It is difficult to break away from a busy practice for any reason unless there are partners to absorb the load while you are gone. This obviously is a decided advantage of group practice. I practice solo; I was in a group practice many years ago. I am able to get away through the cooperation of several of my colleagues, for which I am very grateful. I stand

ready to reciprocate in time and effort.

The dilemma remains, however, whether to combine the learning experiences with vacation time. There are definite advantages to having a full-time vacation with the family, unencumbered by meetings. But the old business of "tax deductions" looms on the horizon as an enticement to combining vacation with education. The office overhead continues, the income drops to zero, and the expenses of travel rise higher and higher.

The business of selecting a vacation site first, and then tying in an education experience with it, is not ideal. It is not ideal if we are honest with ourselves about the desire to obtain further knowledge. Too often some of the education provided at the exotic vacation site is haphazard and of questionable value. Obviously, then, it becomes nothing more than a "tax-dodge."

Numerous hospitals promote these CME programs with the supposed purpose of the trip being secondary and often after the fact. Too often it is, "let's select a nice place to go, then throw together a program to make it tax deductible." Don't misunderstand me; I'm in favor of tax deductions, too. However, too often the entire scheme is a sham.

An easy solution is available. Develop a good program, select a general theme that will be of interest to a majority of prospective attendees; obtain competent speakers of proven worth in teaching; then select a compatible site for that meeting. Often the program will be such that to have it under a palm tree in a vacation paradise would be unrealistic. Any decision to attend must be that of the individual based on his own values and desires. Will it be education, or will it be play?

Our professional responsibilities require a continuous updating of knowledge. Elbert Hubbard (1856-1915) stated, "the recipe for perpetual ignorance is: be satisfied with your opinions and content with your knowledge." Perhaps we must, at times, change our personal opinions and values; we must decide to extend our knowledge through a more concerted learning effort, for if there is no inclination to learn, one is apt to feel he already knows enough.

The choice is yours; your patients will reap the benefits of your knowledge; after all, that is what they are paying for. — M.E.A.

ET TU, CICERO?

THERE SEEMS to be a commonly held opinion that doctors are always out for a buck, that money is their predominant motivating force. Editorial writers frequently engage in this sort of nonsense, and cartoonists get in their whacks. Why is this? Is there no release from this blasphemy? What can be done to escape — if only for a short time — this distressing din?

Perhaps we can turn to the classics for a few moments of quiet relief. Where better to start than with Marcus Tullius Cicero — noble and famous Roman orator, philosopher and statesman? Let us get a glimpse, then, of this great man by telling the story of Cicero and Tiro:

Tiro was a well-known slave of Cicero's who was held in great esteem and affection by his

master because of the slave's wisdom and faithful service through the years. On one occasion, Cicero, upon returning to Rome from Greece, left Tiro behind because Tiro was too sick to make the trip at that time. He was left in the care of a friend. Because of Cicero's concern for his trusted slave, he wrote him three letters while enroute to Rome. In one of these letters, Tiro's doctor was discussed. Cicero indicated that he did not entirely agree with the prescribed diet, although the doctor was known to have a good reputation.

To continue the story: Cicero wrote "Curium iussi omnem pecuniam tibi dare quam cupis." (translation: I have instructed Curius [a banker] to give you all the money you wish.) And then: "Si medico pecuniam dabis, diligentia eius augebitur." (translation: If you give the doctor money, his diligence will be increased.)

My God! Et tu, Cicero? — DANIEL F. CROWLEY, M.D.

Letter to the Editor

COMPUTERS: FRIEND OR FOE

Perhaps the members of the Iowa Medical Society should unite in a class action to resolve the problem of computer processing of health insurance claims. Every insurer who uses computers is suspect.

If a claim submitted by a physician is not letter-perfect it is rejected by the computer. The problem is that vast numbers of errors do not occur in the physician's office and are beyond his control. A great many errors occur in the office of the insurer. These are of two major types: (1) the eligibility of the patient is not correctly plugged into the computer; or (2) the data on the claim form, as submitted by the physician, is not properly fed to the computer by the employees of the insurer. We routinely have claims rejected for errors which do not exist on our copy of the claim.

I do not approach this issue from a punitive,

vindictive, or hostile viewpoint. I merely say that when a physician submits a correct claim on an insured patient his obligation is ended. He should not be compelled to re-submit the claim and payment should not be refused or delayed. Responsibility should be placed at the correct door, frequently at the door of the insurer himself. If the insurance is valid, the claim is correct, and payment is denied, the patient has been defrauded by his insurance company.

Letters to the Editor are welcome. Please address IMS Journal, 1001 Grand Avenue, West Des Moines, Iowa 50265.

Errors can be made by the sales department of the insurer (or by Social Services or Social Security) in getting the recipient's or customer's identification on the computer; errors can be made by the patient; errors can be made by the physician, and errors can be made in the processing of claims by the insurer. It is not rational to hold the physicians responsible for all these errors. — C. E. BERRYHILL, M.D., *Readlyn, Iowa*

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OUR MAN ON EDUCATION

RICHARD M. CAPLAN, M.D.

WHAT IS IT TO THINK?

ONCE UPON a time, when I thought I would become a psychologist (that was before I thought I'd become a musician), I had to enroll in a course called History of Psychology. To my surprise it was taught by a member of the department of philosophy, not psychology, and involved a lot of concern for what the wise and articulate minds of our modern heritage have thought regarding the nature of knowing and thinking. In fact, I learned then, this special segment of philosophical interest is called epistemology and has been a hotly disputed topic since Socrates and Plato. In modern times the philosophers have grown less interested in the topic, perhaps having let it drift to the psychologists, who in fact may now be abandoning the question to the neurobiologists and also, unfortunately, to lots of strange folk who have ideas and little evidence, but a product or point of view to sell.

In this welter of speculation — Descartes, for example, in 1650 declared the pineal gland to be the seat of mind and soul — has appeared

Dr. Caplan is Associate Dean for Continuing Medical Education at The University of Iowa College of Medicine.

the work of Jean Piaget, a Swiss genius who lived long and productively until his death in 1980. Piaget might best be termed an educational psychologist, although his training was firmly in biology and his thought warrants calling him an epistemologist. Labels and pigeon-holes never fit the contributions of geniuses very well, since part of what characterizes them (even to the extent of being a defining characteristic) is the way their minds find relationships among domains where others have not found them. Piaget's thoughts are not easy to grasp; it's easier to learn how to score big at PAC-MAN. But there's a clear link between his notions of how thinking develops, and the organic and evolutionary development of individuals and species.

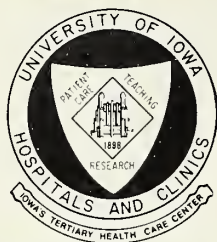
Why do I speak of this? Because I'm currently involved in conducting a research project to study how medical students, residents and practitioners think. Do they develop increasingly sophisticated intellectual structures, which Piaget has well shown to happen in children? The ideas of Piaget have had relatively little testing in adults, and almost none among physicians. The time has come to do that, and you can be a part of it. To become one of the participants in this study, plan to spend about two hours taking some unusually interesting tests (according to some doctors who've already taken them), another half hour for an interview and about five minutes with each of 5 of your patients arranging for their cooperation. In exchange, you'll have some fun, some intellectual stimulation, gain some insight into yourself and your behavior, and play a role in advancing what I hope will be a useful contribution to understanding physicians' and adults' thinking and learning, and the process of continuing education. If you'd like to take a fling at it or just find out more about it, let me know (285 ML, University of Iowa, Iowa City, 52242, or call collect, 319/353-5763.) I need you!

COURSES & CONFERENCES U. of I. COLLEGE OF MEDICINE

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DRUG THERAPY REVIEW



UNIVERSITY OF IOWA HOSPITALS AND CLINICS

REYNOLD SPECTOR, M.D., Editor

ZOMEPIRAC

THE DEVELOPMENT of analgesic medications has been an ongoing effort throughout the history of modern medicine. Morphine was the first narcotic made available when it was released in the 1830s. Soon thereafter, codeine became available, and in 1898 heroin was introduced. Other semisynthetic narcotics have been in use since then. One of the first non-narcotic analgesics, aspirin, was introduced in 1899. Recently, many other anti-inflammatory agents have been released but none has been found to be superior to aspirin in providing analgesia.

Frequently, a clinical situation arises where the analgesia provided by aspirin is not potent enough to relieve discomfort and, therefore, narcotics are prescribed. However, narcotics may produce enough central nervous system and gastrointestinal side effects that they are not satisfactory as analgesics. It may also be necessary for some patients to receive chronic

analgesic medications. When given narcotics, these patients are at a high risk of developing a physical drug dependence.

Until recently, there has not been available an orally acting nonnarcotic medication which provides greater analgesia than aspirin. Zomepirac is a new prostaglandin synthetase inhibitor which has this property.

PHARMACOKINETICS

Zomepirac is available only in an oral form. The peak plasma concentration of zomepirac is reached within one hour following ingestion. There is then a rapid decline in the plasma concentration over the subsequent 4 hours ($t_{1/2\alpha} = 1$ hour) followed by a slower phase of elimination ($t_{1/2\beta} \approx 4$ hours). Ninety-eight and five-tenths percent of the drug is bound to plasma protein. There is no interaction with warfarin but it has been shown that salicylates cause a decrease in the protein binding of zomepirac. No changes have been noted in the bioavailability or excretion of zomepirac when administered with antacids. The drug is nearly totally excreted by the kidneys with 94% of an initial dose being excreted in the urine in the first 24 hours. Steady state concentrations of zomepirac can be achieved in one day with a 4-hour dosing regimen. There is a linear relationship between dose and peak plasma concentration.¹

EFFICACY — SINGLE DOSE

In a double-blind, placebo-controlled, randomized study, the results of the analgesia with zomepirac after third molar removal were studied in 160 patients.² The initial phase of this study compared 3 dose levels of zomepirac (100 mg, 50 mg, and 25 mg) with 650 mg of aspirin and placebo. The 100 mg and 50 mg doses of zomepirac were found to be significantly better in providing analgesia than 650 mg of aspirin. Zomepirac 25 mg was equal to 650 mg of aspirin in analgesic effect. The second phase of the study compared 100 mg and 50 mg of zomepirac with 2 tablets of APC (aspirin 227 mg, phenacetin 162 mg, and caffeine 32 mg per tablet), 2 tablets of APC plus 60 mg codeine, and placebo. Zomepirac 100 mg provided slightly greater analgesia than APC plus 60 mg codeine, although the results were not statistically significant. Zomepirac 50 mg was equivalent to APC plus 60 mg codeine.

In another similarly designed study compar-

This information for Iowa physicians is furnished and sponsored by the University of Iowa Hospitals and Clinics.

ing zomepirac 100 mg and 50 mg with APC tablets plus 60 mg codeine and 60 mg codeine in 148 postoperative patients, similar results were found.³ However, although both zomepirac 100 mg and APC plus 60 mg codeine had an analgesic effect noted within 30 minutes after ingestion, only zomepirac maintained a peak effect over 3 hours.

A third single-dose, double blind, crossover study has found zomepirac 100 mg equivalent to 16 mg of intramuscular morphine as regards analgesia in 159 postoperative cancer patients.⁴

EFFICACY — MULTIPLE-DOSE TRIALS

A multiple-dose, randomized, double-blind study of 247 postoperative patients compared zomepirac 100 mg and 50 mg with 50 mg of oral pentazocine (Talwin).⁵ There was no statistically significant difference in analgesia between zomepirac and pentazocine. However, the pentazocine-treated patients had a greater number of adverse reactions (16%) than did zomepirac 50 mg (4%) or 100 mg (10%).

Zomepirac 100 mg and oxycodone with APC (Percodan) were compared in a randomized, double-blind, placebo-controlled, single-dose trial of 40 patients with cancer pain.⁶ The patients judged zomepirac to provide better analgesia. A repeat dose study was then done with 170 patients. Overall, the patients found oxycodone with APC to provide more pain relief. However, when the results were examined in light of the patients' previous narcotic use, it was found that those patients previously receiving narcotic-containing pain relievers had a better response to oxycodone with APC, whereas those patients who had not been receiving narcotics responded better to zomepirac.

Zomepirac 100 mg has also been found in multiple dose-trials to be at least as effective as APC plus 60 mg codeine in patients with pain following oral surgery and acute orthopedic injuries.^{7, 8}

SIDE EFFECTS

Zomepirac appears to be well tolerated by patients when given long term. Patients with osteoarthritis treated for one year with 300 to 400 mg of zomepirac/day were compared to arthritis patients receiving 3,000 to 4,000 mg of aspirin per day for one year.⁹ The most common side effects reported for both drugs were gastrointestinal in origin, primarily nausea and

dyspepsia. This occurred in 15.8% of patients treated with zomepirac and 20.8% of patients who took aspirin. Gastrointestinal bleeding occurred in 0.7% of zomepirac-treated patients and 1.0% of aspirin-treated patients. Peptic ulcers were documented in 1.2% with zomepirac and 2.0% with aspirin. Very slight increases in BUN and creatinine were seen in patients receiving zomepirac. Other adverse reactions with zomepirac that were seen included skin rash (1%), peripheral edema (3-9%), dizziness (3-9%), and insomnia (3-9%). Urinary tract symptoms occurred at an incidence of 6.8%. However, most of the symptoms were in those patients with a prior history of urinary tract problems.^{10, 13} In patients who are allergic to aspirin or nonsteroidal anti-inflammatory agents, zomepirac may cause bronchospasm and urticaria.

The effects of zomepirac on platelet function have been studied.¹¹ Zomepirac prolongs bleeding time and causes a decrease in both platelet retention and induced platelet aggregation. Although there is a significant prolongation of the bleeding time after a 200 mg dose of zomepirac, it is not prolonged beyond the normal range. The hemostatic effects of zomepirac are usually not detectable after 10 to 12 hours. It is felt that the effects on platelet function are due to reversible inhibition of prostaglandin synthetase in the platelets.

The potential for zomepirac to cause physical dependence appears to be quite low. When zomepirac was discontinued after 12 months of daily use in 57 patients in a double-blind study, there was no evidence of withdrawal symptoms.¹²

DOSAGE RECOMMENDATIONS/COST

Zomepirac is available in oral form only as a 100 mg scored tablet. The usual dosage recommendation is 50 mg every 4 to 6 hours for mild pain, and 100 mg every 4 to 6 hours for moderate to severe pain.¹⁰ The cost to the patient is approximately 30¢ per tablet.

CONCLUSIONS

Zomepirac is a new prostaglandin synthetase inhibitor. In clinical trials, 100 mg of zomepirac has been shown to be as effective as narcotic analgesics in relieving moderate pain without producing apparent tolerance, addic-

(Please turn to page 422)

STATE DEPARTMENT/ PUBLIC HEALTH

RABIES IMMUNIZATION

THE IOWA State Department of Health has facilitated establishment of a regional statewide network of depots to supply vaccine and globulin to physicians, clinics, and hospitals in Iowa. This system was reviewed and approved by executives of all state medical, pharmacy and hospital associations. The consensus of all parties was the present system offers the most advantages and deserves everyone's support.

A list of the depots including two secondary sources is provided. Generally, all facilities offer 24-hour dispensing. Transportation arrangements are the responsibility of the requesting party. The state is not rigidly compartmentalized. Physicians and clinics may decide which sources to utilize for both preexposure and postexposure treatment.

Special Note: Production of rabies vaccine in reduced dosage for intradermal administration is under initial production at Merieux Institute and will be evaluated by the Food and Drug Administration. This product will be introduced for distribution late this year, if found satisfactory by the bureau of Biologics FDA. It will be restricted for use in preexposure vaccination only and will reduce the cost of vaccination significantly.

REGIONAL RABIES VACCINE CENTERS

The Iowa rabies biologics distribution system is listed here. The state is not rigidly compartmentalized; physicians and clinics may decide which sources to utilize. We encourage

This information on public health matters is furnished and sponsored by the Iowa State Department of Health.

use of this system as the best means to supply these products in Iowa.

Facility Name and Address	Pharmacist	Telephone Number
Crowford County Mem. Hospital 2020 First Avenue South Denison, Iowa 51442	Dan Holey	712/263-5021
Pola Alta County Hospital W. First Street Emmetsburg, Iowa 50536	Gregory Hoyman	712/852-2434
University of Iowa Hospital & Clinics Iowa City, Iowa 52242	Harald J. Block	319/356-2577
Cass County Mem. Hosp. 1501 E. Tenth Street Atlantic, Iowa 50022	Jim Theis	712/243-3250
Lucas County Mem. Hosp. N. Seventh St., Box 571 Chariton, Iowa 50049	Bill Boer	515/774-2181
Winnebiek County Mem. Hosp. 901 Montgomery Decorah, Iowa 52101	John Hanson	319/382-2911
Braadlawns Medical Center 18th & Hickmon Des Moines, Iowa 50314	Win Mate	515/282-2227
Sortari Memorial Hospital 6th & College Street Cedar Falls, Iowa 50613	Dave Wright	319/266-3584
Dickinson County Mem. Hospital Highway 71 South Spirit Lake, Iowa 51360	Gayle Moyer	712/336-1230
St. Lukes Medical Center 2720 Stane Park Blvd. Sioux City, Iowa 51104	Jahn F. Lederer	712/279-3500
St. Joseph Mercy Hosp. 84 Beaumont Drive Mason City, Iowa 50401	Dale Sargent	515/424-7606
Mory Greeley Hospital 117-11th St. Ames, Iowa 52001	Neezbat Khon	515/239-2011
Mercy Health Center St. Josephs Unit Mercy Drive Dubuque, Iowa 52001	Bernard Fax	319/589-9034
Burlington Med. Center 602 N. Third St. Burlington, Iowa 52601	Darwin Caaley	319/753-3285 If no answer, E.R. 319/753-3264
Jennie Edmundsan Mem. Hosp. 933 E. Pierce St. Council Bluffs, Iowa 51501	Joe Muelleman	712/328-6009
Mississippi Valley Regional Blood Center 3425 E. Locust Street Davenport, Iowa 52800	N/A	319/359-5401 5406
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D

An offering statement for this subdivision has been filed with the Iowa Real Estate Commission and a copy of such offering statement is available from the subdivider upon request.

DRUG THERAPY REVIEW

(Continued from page 419)

tion, or equivalent central nervous system or gastrointestinal side effects.^{5, 7, 8} Although the cost is somewhat greater, in selected patients with mild to moderate pain not relieved by aspirin, zomepirac may be preferable to oral narcotics. — ANN ECKSTEIN, M.D., *Fellow in General Internal Medicine*

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August 1982 Morbidity Report

Disease	August 1982 Total	1982 ta Date	1981 ta Date	Most August Cases Reported From These Counties
Amebiasis	2	53	12	Jahnsan, Muscatine
Brucellosis	0	3	1	
Chickenpox	0	5853	6989	
Campylobacter	42	207		Palk, Dubuque, Black Hawk
Cytomegalavirus	7	33	18	Palk, Cass, Jackson
Eaton's Agent				
infection	27	168	19	Linn, Palk, Scott
Encephalitis, viral	5	21	14	Dubuque
Erythema				
infectiosum	0	246	1152	
Gastroenteritis (GIV)	26	7998	12241	Black Hawk, Scott, Jahnsan
Giardiasis	17	89	53	Black Hawk, Henry, Jasper
Guillain-Barre	1	13		Buchanan
Hepatitis, A	2	54	169	Dubuque, Jasper
Hepatitis, B	8	66	60	Palk
Hepatitis, Non A-B	2	10		Allamakee, Linn
Hepatitis				
type unspecified	4	22	41	Dubuque
Herpes Simplex	41	272	151	Palk, Jahnsan, Linn
Herpes Zoster	0	10	4	
Histoplasmosis	0	14	7	
Infectious				
mononucleosis	0	127	190	
Influenza,				
lab confirmed	1	74	191	Jackson
Influenza-like illness (URI)	261	27485	48965	Jahnsan, Black Hawk, Scott

Disease	August 1982 Total	1982 ta Date	1981 ta Date	Most August Cases Reported From These Counties
Legionellosis	2	18		Dubuque, Palk
Malaria	1	6		Jahnsan
Meningitis				
aseptic	10	37	44	Dubuque, Palk
bacterial	15	114	86	Dubuque, Clayton
meningococcal	0	5	18	
Mumps	1	30	43	Crawford
Pertussis	0	5	3	
Rabies in animals	34	288	634	Allamakee, Palk, Linn
Rhede Syndrome	1	5		Buchanan
Rheumatic fever	0	3	7	
Rocky Mt.				
Spotted Fever	1	4		Palk
Rubella				
(German measles)	0	0	4	
Measles	0	0	1	
Salmonellosis	29	201	175	Linn, Palk, Warren
Shigellosis	16	40	23	Pattawattamie
Toxic Shock				
Syndrome	0	14		
Tuberculosis				
total ill	7	54	69	Scott, Clayton, Howard
bact. pas.	6	39	43	Scott, Clayton, Howard
Typhoid Fever	0	1		
Veneral diseases:				
Gonorrhea	398	3071	3383	Palk, Scott, Black Hawk
Syphilis	3	21	16	Jahnsan, Palk, Scott

Laboratory Virus Diagnosis Without Specified Clinical Syndrome: Adenovirus — 3, Palk, 1, Linn, 1, Lucas; Blastomycosis — 1, Dubuque; ECHO — 1, Jackson, 2, Jahnsan, 1, Palk; Coccidioidomycosis — 1, Linn, 1, Palk, 1, Warren

NEWS/PRODUCTS, PROGRAMS, ETC.

Information on various products, programs, etc., is received regularly by the IMS JOURNAL. Here are short items sifted from the mail by the Scientific Editor. A reference to a specific product is not intended to suggest any particular endorsement. Additional information on any entry may be obtained by contacting the IMS JOURNAL.

DOSAGE FOR CHILDREN — G. S. Searle & Co. has received FDA approval to include a recommended dosage for children in its labeling for Norpace® (disopyramide phosphate). The new pediatric dosage will provide a suggested maintenance schedule for children under age 18 who are afflicted with such arrhythmias as premature ventricular contractions (unifocal, multifocal or paired PVCs) and episodes of ventricular tachycardia.

TRANSPARENT DRESSING — 3M Tegaderm brand transparent dressing has a semipermeable film which permits moisture vapor to evaporate from the skin, provides a moist healing environment for skin lesions, while acting as a barrier to bacteria and water. A variety of sizes is available. More information and product samples may be obtained from Medical Products Division ME 82-12, 3M, P.O. Box 33600, St. Paul, Minnesota 55133.

UPDATED CPT AVAILABLE — Over 60 revisions are included in the sixth update of the AMA *Current Procedural Terminology-4*. This update is being sent to individuals who completed and returned the prepaid card in the CPT-4 book. CPT-4 and future CPT updates may be requested from the Order Department, AMA, P.O. Box 821, Monroe, Wisconsin 53566. Single copies are \$19.95 plus \$2 for postage and handling (fourth class book rate) or \$3 for delivery by U.P.S. Updates one through six are included. Future updates will cost \$5.

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ABOUT IOWA PHYSICIANS

Dr. Charles Semler, Sr., Story City, recently was presented a plaque by the Story City Memorial Hospital Board of Trustees commemorating his 40 years in the medical profession. Dr. Semler began his medical practice in Gravity in 1942 and located in Story City in 1944. . . . **Dr. David Clark** recently joined **Dr. Robert Haakenson** in family practice in Forest City. Dr. Clark received the M.D. degree at the U. of I. College of Medicine and completed his family practice residency in Rockford, Illinois. He recently completed a two-year obligation with the National Health Service Corps. . . .

Dr. Asha N. Madia recently began a pediatric practice in Indianola. Dr. Madia received her medical training in Bombay, India; located in the United States in 1975 and completed her pediatric residency at Blank Childrens Hospital in Des Moines. . . . **Dr. George D. Aurand**, Clinton, recently presented a research paper to the 8th North American Prairie Conference at Western Michigan University in Kalamazoo, Michigan. Dr. Aurand's paper was entitled, "The Establishment of Native Grasses and Forbs Using a Modification of the Planting Board Method." . . . **Dr. Millard A. Troxell**, Cedar Rapids, has retired from medical practice. Dr. Troxell received the M.D. degree at the U. of I. College of Medicine; interned at St. Mary's Hospital in Duluth, Minnesota and served his dermatology residency at Ancker Hospital in St. Paul, Minnesota. He began his medical practice in Cedar Rapids in 1953.

Dr. Charles Ripp has joined Medical Associates in Newton. Dr. Ripp received the M.D. degree at Creighton University School of Medi-

(Please turn to page 426)



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NEW IOWA DOCTORS

Dr. Becca Brandt has joined her husband, **Dr. Kim Brandt**, and **Dr. Robert Sautter** at the Mount Vernon Family Medical Center. Dr. Brandt received the M.D. degree at the U. of I. College of Medicine and completed her family practice residency in Cedar Rapids. . . . **Dr. Reddy Reganti** has joined the Burlington Medical Center. Dr. Reganti received his medical education at Osmania University in India. He took postgraduate work in radiation oncology at Columbia Presbyterian and Mt. Sinai Hospital in New York City and also studied diagnostic radiology at the New Jersey Medical School. Prior to locating in Burlington, Dr. Reganti practiced radiation oncology and radiology in New Jersey and New York. . . . **Dr. Wai Cheung** recently began medical practice in Tabor. Dr. Cheung received the M.D. degree from the University of Nebraska School of Medicine in Omaha and completed his family practice residency at Hamot Medical Center in Erie, Pennsylvania. . . . **Dr. Paul Weber** recently joined the Main Street Family Practice Center in Denver. Dr. Weber received the M.D. degree at the U. of I. College of Medicine and served his family practice residency at the Black Hawk Area Family Practice Program in Waterloo. . . . **Dr. Craig W. Brown** and **Dr. Steven W. Tarr** recently began family practice at Cedar Falls Medical Associates. Dr. Brown completed his family practice residency at Rockford, Illinois and Dr. Tarr finished his residency program in family practice at the U. of I. College of Medicine.

Dr. Edward Piller has joined **Dr. Martha Capizzi** in family practice in Glenwood. Dr. Piller received the M.D. degree at Creighton University School of Medicine in Omaha. In addition to his Glenwood medical practice, Dr. Piller will also be an internal medicine resident at Jennie Edmundson Hospital in Council Bluffs. . . . **Dr. Gordon Baustian** and **Dr. Gary Mansheim** recently entered family practice in

Burlington. Dr. Baustian received the M.D. degree at the U. of I. College of Medicine and completed his family practice residency at E. W. Sparrow Hospital in Lansing, Michigan. Dr. Mansheim received the M.D. degree at the U. of I. College of Medicine and served his family practice residency at St. Joseph Hospital in Flint, Michigan. . . . **Dr. E. Michael Sarno** recently joined **Dr. Robert S. Brown**, Des Moines, in the practice of ophthalmology. Dr. Sarno received the M.D. degree at the U. of I. College of Medicine and completed his ophthalmology residency at the University of Kansas School of Medicine. He recently completed a fellowship in corneal transplant surgery at the Estelle Doheny Eye Foundation of the University of Southern California. . . . **Dr. James Eaves** recently began family practice in Clarinda. Dr. Eaves received the M.D. degree at the University of Tennessee Medical School and served his family practice residency in Tulsa, Oklahoma and Martina, California. . . . **Dr. Dwight J. Schroeder** recently joined the Cedar Centre Psychiatric Group in Cedar Rapids. Dr. Schroeder received the M.D. degree and completed his psychiatric residency at the U. of I. College of Medicine.

Dr. Dino Andriani and **Dr. Paul Mittelstadt** recently joined the Cresco Medical Center. Dr. Andriani received the M.D. degree at Dalhousie University Medical School, Halifax, Nova Scotia and interned at Victoria General Hospital in Halifax. Dr. Mittelstadt received the M.D. degree at the University of Minnesota Medical School and interned at St. Joseph Hospital in Mason City. Both are family practice physicians. . . . **Dr. Michael A. Cronkleton** has joined the Davenport Clinic. Dr. Cronkleton received the M.D. degree at the U. of I. College of Medicine and served his internal medicine residency at Henry Ford Hospital in Detroit, Michigan.

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cine in Omaha, Nebraska and completed his family practice residency at St. Michael's Hospital in Milwaukee, Wisconsin. . . . **Dr. Bill Buckley** recently began the practice of surgery in Jefferson. Dr. Buckley received the M.D. degree at the U. of I. College of Medicine, and had his surgery residency also at the U. of I. . . . New officers of the Cherokee Mental Health Institute staff are — **Dr. James Duggan**, president; **Dr. Sherman Lindell**, vice president; **Dr. Brian Fulton**, secretary and **Dr. B. Frank Vogel**, chief of staff. . . . **Dr. Lee C. Chiu**, professor in the Department of Radiology at the U. of I. College of Medicine, has been named a fellow of the American College of Radiology.

Dr. Patrick J. Collison has assumed the practice of **Dr. Thomas R. Updegraff** in Waterloo. Dr. Collison received the M.D. degree at the U. of I. College of Medicine; interned at Lutheran Hospital in LaCrosse, Wisconsin, and served his residency in otolaryngology at the U. of I.

. . . **Dr. Dale G. Wicklund** recently began family practice in Lansing. Dr. Wicklund received the M.D. degree at the University of Hawaii Medical School; interned and served his family practice residency at Tripler Army Hospital in Honolulu. . . . **Dr. Paul H. Weber** has joined **Dr. Kenneth D. McMains** to practice family medicine in Denver. Dr. Weber received the M.D. degree at the U. of I. College of Medicine and completed his family practice residency at the Black Hawk Area Family Practice Center in Waterloo.

DEATHS

Dr. Olin A. Elliott, 76, longtime Des Moines physician, died August 13 at Iowa Methodist Medical Center in Des Moines. Dr. Elliott received the M.D. degree at the University of Nebraska School of Medicine in Omaha, Nebraska. A native of Griswold, Iowa, he had practiced medicine in the Des Moines area for 50 years. Following World War II, Dr. Elliott and two other physicians established the Beavertdale Medical Clinic in Des Moines. In 1956 Dr. Elliott served as a missionary doctor for a Presbyterian Church in Alaska and in 1978 established the first medical office at the Bethel Mission in Des Moines. He had been medical director of Calvin Manor since 1965. Dr. Elliott was a fellow of the American Academy of Family Physicians and a life member of the Iowa Medical Society.

Dr. Wilson C. Wolfe, 70, Ottumwa, died at his home on August 26. Dr. Wolfe received the M.D. degree at the U. of I. College of Medicine. He retired in 1976 after practicing otolaryngology for many years in Ottumwa.

Dr. Frank S. Peckosh, 77, Lost Nation, died August 23 at Crestridge Nursing Home in Maquoketa. Dr. Peckosh received the M.D. degree at the U. of I. College of Medicine, and had practiced in the Lost Nation area for 48 years prior to his retirement.

CLASSIFIED ADVERTISING

RADIOLOGY — EXPANDING DES MOINES BASED RADIOLOGY GROUP — interested in providing radiology services to an additional hospital within a 50-mile radius of Des Moines. All group members are university trained and AMA board certified. Prefer fee for service arrangements. For additional information, write NO. 1546, JOURNAL OF THE IOWA MEDICAL SOCIETY, 1001 Grand Avenue, West Des Moines, Iowa 50265.

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In The Public Interest



D. M. Site For Health Vote 82

HEALTH CARE DELIVERY in Iowa right now has about as many interesting and diverse projects as at any time in history.

Des Moines is the site of one this fall. Actually, the project is countywide. In a September letter to about 200 local recipients, the innovative program was called "a unique public education campaign on health care and health care cost." Its name is *Health Vote 82*.

What we have here in Des Moines is chapter one of a national project called the "Five City Plan." In this first chapter the goal is to raise the consciousness and understanding of Des Moines citizens about the health care they receive and pay for. As suggested, the idea for the project emerged a thousand or more miles away. It came out of the minds of those who form the Public Agenda Foundation (PAF) in New York. PAF is a nonprofit, nonpartisan research and education organization.

Des Moines' *Health Vote 82* will be followed by similar programs in four other cities. In each instance a single important topic (only Des Moines will deal with health care) is to receive intense public exposure for a concentrated period. An attempt to measure the growth in public understanding will be undertaken. For instance, in Des Moines, *before* and *after* scientific polls will be conducted to see what increase (if any) there has been in public understanding of health care, as a consequence of the educational program.

So, what will be happening in Des Moines between October and December? There will be two countywide public education mailings; the second will have as a part of it a ballot on which a citizen may respond. There will be a special health care awareness newspaper supplement and other media exposure. There will be as many showings as possible of a specially-made film depicting Des Moines health care delivery and approaches in use elsewhere. There will be organized as many meetings as possible of

service, civic, educational, etc., groups to present information on health care.

The intent is not to advocate change in the existing system. This is emphasized by Kate Sheaffer, PAF project director for *Health Vote 82*. The desire is rather to explain to as many citizens as possible how health care is delivered in Des Moines and what is being tried in other parts of the country.

The public education campaign, says Ms. Sheaffer, bases itself on what is well known—that health costs are rising. What does this mean and what does it call for? These factors will be cited (with pros and cons): (1) costs may be high but quality is superior, so let the marketplace operate; (2) alternate approaches are emerging, in Iowa and elsewhere, e.g., HMO's, outpatient surgical care, more paraprofessional involvement, so let's experiment more; and (3) payment by third-party mechanisms has overinsulated patients from the monetary aspect of health care, so let's have more consumer involvement as an incentive to conserve dollars.

Kickoff events for *Health Vote 82* came September 29-30. Now in process is a program to touch persons all across the socioeconomic spectrum. Organizationally, *Health Vote 82* has received backing from the now-disbanded Governor's Commission on Health Care Costs and from the new Health Policy Corporation of Iowa. A local advisory committee is furnishing community direction — with a similar body also guiding from the home base of the Foundation. Leadership locally is coming from business, industry, labor, government and from the health care providers. The input and involvement of the Polk County Medical Society is included here.

Financing is substantial for the brief program. In the neighborhood of \$350,000 is budgeted, with over \$200,000 coming from the PAF and the rest from local contributions.

The Public Agenda Foundation will prepare a post-campaign report to tell community leaders what Des Moines citizens understand about health care delivery. The whole project seems worthy. So, if you are a Des Moines resident, stay alert in coming weeks for material carrying the *Health Vote 82* logo.

October 1982

Journal of the Iowa Medical Society



PRESIDENT'S PRIVILEGE

A TIME FOR CONCERN

The competent physician, before he attempts to give medicine to his patient, makes himself acquainted not only with the disease which he wishes to cure, but also with the habits and constitution of the sick man. — MARCUS TULLIUS CICERO (106-43 B.C.)

IS THIS QUOTATION from another era applicable today? I think it is!

As a state population, we find ourselves in the midst of difficult times. The extended economic downturn is putting a severe strain on many of our fellow Iowans. Unemployment is hitting us hard. Our dependence on a lagging farm market is having a serious impact. The loss of health insurance holds the potential for catastrophic hardship for some people.

As a consequence of these and other troubling factors, Iowans across the state are deeply worried about meeting personal and family financial obligations. The traits of reliance and dependability for which Iowans have gained a reputation are being tested in ways many of us have not witnessed previously.

Characteristically, physicians demonstrate understanding and concern when well-intentioned patients come to explain a hardship. Now is most certainly a time when we need to close ranks around these characteristics. We need to be accessible and open to

working out special arrangements when we know a family is bypassing necessary and important care because their resources are depleted. I know offices and clinics of Iowa physicians have responded and are responding to these kinds of needs in various ways. We all need to respond to legitimate need.

As we mark the traditional time of Thanksgiving, join me in thinking about the first and most important of the principles of medical ethics: *A physician shall be dedicated to providing competent medical service with compassion and respect for human dignity.*

Hormoz Rassekh, M.D.
President

P.S. Please put this November issue in your reception area when you have read it. There are several articles of interest to patients and others.

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Associated since its beginning in 1946 with one of the country's oldest surgical residencies, Dr. Throckmorton for two years has been its program coordinator at Iowa Methodist Medical Center. He is pictured with first-year residents Mike Faust (shown partially) and Mark Asplund of Bloomer, Wisconsin.

A Point of View

A Return To the Marketplace

TOM D. THROCKMORTON, M.D.
Des Moines, Iowa



Let the marketplace work! It will measure out rewards! This is the thinking of a senior Des Moines physician. Capable as a writer and as a forthright observer, the author was asked by the JOURNAL to give his perspective on today's medical climate. Do you agree?

AS I WRITE these lines I am alternately filled with pride, genuinely embarrassed, and in turn enervated by deep frustration. The pride is in the spectacular advancement of medical knowledge, techniques and in the exotic tools made available. The embarrassment stems from the heedless, sometimes almost

The author is Coordinator, Surgical Residency, Department of Surgical Education, Iowa Methodist Medical Center in Des Moines, Iowa.

amoral, activities of a few of my colleagues which reflect badly upon a great profession. The deep frustration results from the endless difficulties placed in the path leading to an efficient, high quality health service. It is this problem I wish to address.

Basically, the origin of the problem lies in the human desire to package, distribute or otherwise control the product of another person. The world is full of entrepreneurs, well intentioned and otherwise, who have never produced anything or offered a real service. Yet, somehow they consider themselves, with almost religious zeal, qualified to assume control over the products and services of others. These are the same people who wrap tomatoes

(Please turn to page 442)

A RETURN TO THE MARKETPLACE

(Continued from page 441)

in Saran Wrap at the market, thus doubling their price but leaving their value unaltered. The dispensing of health care seems to have more than its fair share of these non-productive parasites; as a group they comprise *Third Party Medicine*.

You see, real medicine is basically a one-on-one relationship between patient and physician, expanded on occasion to include the interrelationship of the hospital. Their relationships are personal and exclusive. But then, the wrappers, packagers, and dispensers came

My grandfather said, "Take good care of your patients and they'll take good care of you." True words!

on the scene: (1) insurance programs that did not really operate on insurance principles but became a sort of prepayment gimmick; (2) a congressional desire to distribute health like a largess; (3) labor unions greedily tucking away health care as a tax-sheltered fringe benefit; (4) management and large corporations anxious to pacify their labor forces with a tax exempt check; (5) a Federal Government which is utterly incapable of balancing its own budget, but which feels a great humanitarian urge to protect the citizenry from cradle to grave. These comprise most of the *Third Party* which has deftly inserted itself between the patient and his "providers," as physicians and hospitals are categorized by the *Third Party*. (The *Third Party* also dignifies patients as *consumers*.)

TAKE GOOD CARE

My grandfather said, "Take good care of your patients and they'll take good care of you." True words! But nowadays, I take care of the patient and a check from some *Third Party* takes care of me. The patient has been relieved of his responsibilities and debt to his physician. He has turned these valuable objects of barter over to the faceless little people of the *Third Party*. In 40 years I have never received a note from the *Third Party* saying, "Thank you doctor, well done!" Many of my days have been brightened by such notes from a thoughtful patient.

The gist of insurance lies in spreading the costs of *unpredictable* events over an exposed group of people.

As health insurance programs were broadened beyond any actuarial limits and allowed to cover events or items over which the patient exercised some degree of control, the costs soared. Surely not *all* pregnancies are accidents. I suppose the jacking-up of a female bosom must relieve an occasional backache, but some patient control can be exercised over such events and they are not insurable. Thus, when health and accident insurance went beyond the fairly standard indemnity policy, trouble began. This is prepayment, not insurance!

RESPONSIBILITY ELIMINATED

The patient now feels little or no responsibility toward the payment of his medical debts. They are covered by a *Third Party*. The corollary of this is, of course, that the patient feels no responsibility to determine whether the actual services were performed or that the fees charged for them were fair. There was no marketplace to tell him. The *Third Party* took care of all that sort of detail. And so, like Topsy,

No one ever said "No"; the great rush was to cover anything and everything. . . . The great rush was to price medical care right out of reality.

medical expenses just grew. No one ever said "No"; the great rush was to cover anything and everything. The great rush was to sell a better plan and more of them. The great rush was to price medical care right out of reality. The responsibilities of the patient have been ignored. And these very responsibilities, at one time, were the pressures which governed the marketplace.

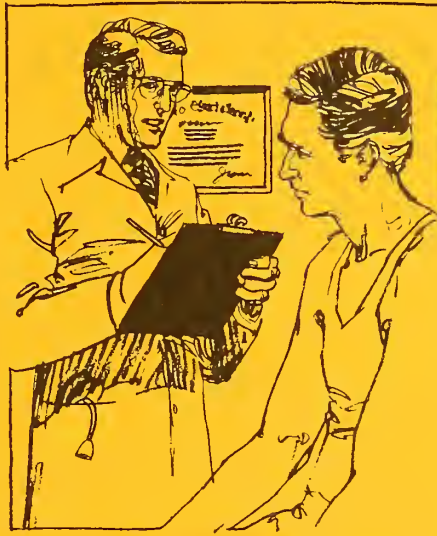
I say, let us return to the marketplace; I say, let us return to a meaningful and responsible relationship between the patient and "provider." If there is to be an upheaval in medical care, let it be along these lines:

1. *Return to genuine insurance-type medical coverage which indemnifies the patient against medical costs.*

2. *Just as no "full coverage" automobile insurance is currently available, so all such medical poli-*

(Please turn to page 443)

WHAT YOU CAN DO TO HELP YOUR DOCTOR HELP YOU



“You know, doc, I’ve been feeling lousy for several weeks. No appetite, no get up and go. My stomach’s been hurting right in this spot here.”

This could be John Q. Patient, opening a conversation with his physician about anyplace in Iowa.

“John, let’s go over your record here and bring it up to date. Tell me a little more about how you’ve been feeling. Can you describe your symptoms in more detail?”

And this might be the physician’s first response.

This simple exchange establishes an important partnership between patient and physician. It says clearly that communication is the foundation of the doctor/patient relationship. And, therefore, it needs to be open and honest. This is just as valid whether you are in contact with your family physician, or if you are referred to another specialist.

There is no substitute for an accurate and complete medical history. Working with it, the physician can apply ever-advancing technology. Tests and examinations can be accomplished; a diagnosis can be made, and a course of therapy selected.

So, how can you best help your doctor to help you?

When you contact your physician about health concerns, he or she can do his/her job best if you provide some important information. On the inside pages is presented what we call a Thought Organizer. It mentions two or three situations in which you would be contacting your doctor. It presents some questions you should think about before you call. Or, if appropriate, you may wish to write down the answers and bring them to the office.

**ANSWERS TO THESE QUESTIONS WILL HELP YOUR DOCTOR
ATTEND TO A PROBLEM YOU HAVE DEVELOPED RECENTLY:**

1. What is your problem (in as few words as possible)?

2. When did it start?

3. What did you first notice?

4. What have you done for it so far?

5. Do you have:

Fever?	_____	Nausea, vomiting?	_____
Diarrhea?	_____	Pain (sharp, dull; location; constant or intermittent)?	_____
Fainting or dizziness?	_____	Bleeding?	_____
Coughing (Are you coughing up anything?)	_____		_____

6. Have you had this before?

7. What medications are you taking? (Bring bottles with you.)

8. What operations have you had?

9. Does this seem similar to something someone else in your family has had?

10. Do you suspect poisoning? If so, what? (Please bring bottle or container.)

**BEFORE UNDERGOING A ROUTINE PHYSICAL EXAMINATION,
ANSWER THE FOLLOWING QUESTIONS AND BRING THEM WITH
YOU. THEY WILL HELP YOUR PHYSICIAN LEARN ABOUT YOUR
CURRENT HEALTH STATUS.**

1. Is there anything that worries you about your health?

2. Have you had past surgery or hospitalizations your doctor is not aware of?

3. Since last seeing your doctor, have you had any serious or extended illness (lasting more than one week)?

4. What illnesses have you had in your family (parents, brothers, sisters, aunts, uncles)? Please specify.

Stroke	_____	Heart Disease	_____
Diabetes	_____	Hypertension	_____
Cancer	_____	Bleeding disorder	_____
Gout	_____	Arthritis	_____
Alcoholism	_____		

5. What about your personal habits?

Smoking: No_____ Yes_____ How much?_____ How long?_____

Alcohol intake: None_____ Moderate_____ Heavy_____

Work satisfaction: Excellent_____ Good_____ Poor_____

Sleep pattern: Good_____ Bad_____ No. of hours_____

Appetite: Excellent_____ Good_____ Poor_____

Recreation/exercise: Regular_____ Occasional_____ Seldom_____

6. What important changes have occurred in the past year?

Weight: Gain_____ Loss_____

Family situation: _____

Job status: _____

Home location: _____

Other: _____

7. What medications (either prescribed or not) are you taking? Bring them with you.

8. Have you been seen in the past year for other important health needs?

Dental: Yes_____ No_____

Vision: Yes_____ No_____

Hearing: Yes_____ No_____

Other: _____

IF A SUDDEN INJURY (TRAUMA) OCCURS IN YOUR FAMILY, YOUR DOCTOR MAY NEED TO BE REACHED BY TELEPHONE QUICKLY TO DETERMINE THE COURSE OF ACTION. HE/SHE WILL WANT TO KNOW THE FOLLOWING INFORMATION:

1. Where is the injury? Describe it.

 2. How and when did it occur?

 3. Is there bleeding? If so, can you control it?

 4. Is there a cut? If so, what is its length and does the wound gap open?

 5. Has there been any loss of consciousness? If so, how long?

 6. Is the injury preventing movement or causing a loss of feeling in any part of the body?

 7. Is there evidence of a fracture (deformity, bump, did you hear a snap or cracking sound)?

 8. Do you know about tetanus immunization? When was the last shot?

-

MAINTAINING YOUR GOOD HEALTH IS A PERSONAL RESPONSIBILITY. YOUR PHYSICIAN CAN ADVISE YOU ON WHAT TO DO, BUT PERFORMANCE DEPENDS ON YOU. HEALTH MAINTENANCE IS A PARTNERSHIP BETWEEN YOU AND YOUR PHYSICIAN. HERE ARE SOME IMPORTANT HABITS TO FOLLOW TO MAINTAIN GOOD HEALTH:

- | | |
|-----------------------------------|-----------------------------|
| 1. Regular meals at regular times | 5. Immunization maintenance |
| 2. Moderate and regular exercise | 6. Moderate weight |
| 3. Adequate sleep | 7. Alcohol in moderation |
| 4. No smoking | 8. Use seat belts |
-

The content of this folder has been developed by the Patient Education Committee, Department of Family Practice, University of Iowa College of Medicine. Leslie E. Weber, M.D., is chairman of this committee. This "What You Should Do to Help Your Doctor Help You" folder is part of the ongoing health education program of the Iowa Medical Society, 1001 Grand Avenue, West Des Moines, Iowa 50265. Additional copies are available on request.

A RETURN TO THE MARKETPLACE

(Continued from page 442)

cies should contain a basic deductible amount — no “first dollar” coverage.

3. All such policies should make room for the genuine “medical catastrophe.” These are actually infrequent, but frightening when they occur.

4. All such policies should be payable to the patient. If he or she wishes to spend it on booze or assign the benefits to a physician or hospital, the right of decision is that of the “consumer.”

5. The tax exempt status of health plans, as exercised by labor and management, should be removed. The value of the policy should be made income to the recipient.

6. Such policies should be made available to all welfare recipients. This suggests a return to charity on occasion — a fulfilling experience that many “providers” have never had.

RESTORE THE MARKETPLACE

If health services are had through an H.M.O. or some similar agency, it is a simple matter to incorporate the above criteria into the contracts.

And now, what is the planned result of all this health care upheaval? Well, first and foremost, to bring the patient squarely back into

the picture as a genuine “consumer,” with certain very obvious responsibilities for his own health care. But, more than that, it restores the marketplace! For four decades health care has been outside the laws which govern the marketplace; now, these laws will be restored. The competition, now so sadly lacking, will be renewed by the patient. Costs, fees, the necessity for hospitalization or certain other measures, are bound to be challenged from time to time. Today’s physician, who burdens the record with “tests” to avoid malpractice, may find himself better avoiding it by becoming acquainted with his patient. A more genuine doctor/patient relationship is bound to exist.

Back in 1875 there were seven physicians in Derby, Iowa. Competition was bitterly keen; not based so much on money as upon service rendered. That form of competition will return tomorrow. Life and my patients have treated me well. Regardless of money or controls, I cannot imagine any more thrilling and satisfying business than solving and taking care of the problems of the sick. I have loved it. And, I have noticed that when the laws of the marketplace are abused, as by monopoly or subterfuge, there eventually comes along a well deserved upheaval. And once again, the marketplace will measure out rewards. And, I sincerely hope none such rewards come slickly enveloped in Saran Wrap.

“WHAT YOU CAN DO TO HELP YOUR DOCTOR HELP YOU” SUPPLEMENT AVAILABLE TO IMS MEMBER PHYSICIANS & OTHERS

The preceding 4-page special “What You Can Do To Help Your Doctor Help You” supplement is available in quantity for additional health education use. Copies may be placed in office reception areas or given to patients in connection with an office visit. Quantities may be ordered from the Iowa Medical Society (at \$10 per 100 to cover printing costs). The order form below is provided for your convenience in obtaining additional copies.

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PLEASE SEND _____ COPIES OF THE “WHAT YOU CAN DO TO HELP YOUR DOCTOR HELP YOU” SUPPLEMENT TO OUR OFFICE.

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QUESTIONS - ANSWERS

ROBERT J. CORRY, M.D.
Iowa City, Iowa

NEW SURGERY HEAD SPEAKS OPTIMISTICALLY

New as head of the Department of Surgery at the University of Iowa, Dr. Corry offers some opinions about both today and tomorrow in the field where he will provide leadership.

The lay press carries periodic reports about too much surgery being done across the country. How do you respond to such comment?

I would say that more surgery is being done per capita in the United States than in some of the European countries. However, I don't think that too much surgery is being performed. Moreover, I believe that the patient has better access to surgical care in this country than in other countries. We have a more aggressive approach to many diseases, i.e., coronary artery disease, cancers and cerebrovascular disease, which tends to improve the quality of life for many more patients.

Surgery is divided into many highly specialized facets. Is it your belief that this specialization will continue and intensify?

There is no question that specialization will intensify tremendously. I would envision that in the academic centers specialization would be essential for their vitality. For example, the academic institutions must offer operations which are not being performed in other centers, such as transplantation of all organs, complicated gastrointestinal and cardiac surgery. Furthermore, it is mandatory that the academic center be at the forefront in developing newer

techniques in surgical care which will be of service to the patient and referring physician.

It would be natural for you to give high marks to the surgical training at the U. of I. Are there any measurements to back this up?

Many of our resident graduates have gone into practice in the State of Iowa where they are providing outstanding surgical care for their patients. In addition, we have produced a few academic surgeons in the past few years who have made major contributions to academic surgery and patient care. For example, Dr. Jeff Lewis, a recent graduate of our program, has the largest series of patients with esophageal varices controlled by the sclerosis technique. Dr. Cram, the director of our Burn Unit and Emergency Center, has made major contributions. Dr. Loren Hiratzka is one of the leading cardiothoracic surgeons in our department who has made major clinical and research contributions.

What are your hopes for the department as you assume a greater leadership role?

Our major goals are as follows. First, we are very interested in providing better and more efficient surgical care for our patients in terms of not only providing newer and more innovative types of procedures for complicated illnesses but in providing a more efficient and better quality of care for the more routine illnesses. We hope to provide a more open system of communication between the referring physician and the surgeon at University Hospitals. Secondly, we are very interested in developing a scholarly type of Department of Surgery where every individual in the department is not only carrying out but developing newer techniques in clinical surgery. We are hopeful that the basic research contributions will continue and increase. We are at the forefront in surgery of the obese patient, pediatric surgery, cerebral aneurysm surgery, pituitary surgery, congenital and adult cardiac surgery and transplantation. Care of the patient with cancer remains a challenge and we will hope to be at the forefront in that area in terms of providing better care and implementing newer research techniques to patient care. Thirdly, we hope to improve the training program for our

(Please turn to page 457)

THINGS YOU SHOULD KNOW

SURVEY OF IOWANS

An independent survey of the perceptions of Iowans as to their confidence in their physicians has produced favorable findings. The survey was undertaken by a highly regarded polling organization under joint auspices of the IMS and AMA. Comparisons of the responses are made between the national and Iowa respondents. Findings of the survey will be furnished to the membership in greater detail; they were disclosed to the IMS Board of Trustees October 21.

ALTERNATE DELIVERY MATTERS

Based on recent focus group interviews with selected Iowa physicians, Blue Cross/Blue Shield staff is recommending to its respective boards that progress be continued toward developing procedures (contracts, payment methodology, etc.) to allow IPAs in 3 areas of the state. This further development, if approved, is expected to take until April, with, pending final approval, implementation possible by July 1983.

MEDICAID MATTERS

Proposed changes in Iowa Medicaid will be presented by the chief, Bureau of Medical Services, Iowa Department of Social Services, to the IMS Committee on Public Assistance November 4. Ideas being advanced by the DSS include elimination of on-site physician supervision of PA service for reimbursement, direct reimbursement to nurse anesthetists, and a prepaid primary care network to reimburse such physicians in advance.

DUES FOR 1983

1983 dues notices will be mailed to member physicians in mid-November. Dues continue at the \$275 level set by the 1977 IMS House of Delegates. The IMS continues to assist most county medical societies with the administrative aspects of the dues billing process.

IOWA HOSPITAL LICENSURE

A bill revamping the Iowa hospital license law will be submitted this month to the State Board of Health by the State Department of Health. This second draft allows for overriding the long-standing corporate practice rule which precludes employment of physicians to deliver medical services. The IMS is a staunch advocate of maintaining existing Iowa law in this area - although the Society has taken no position to date on the updating of the hospital license law written in 1947.

X-RAY RULES

Further revised state rules covering minimum x-ray training for technicians will come before the State Board of Health in November. The newest revision has been found acceptable to the IMS and the Iowa Hospital Association. The latest version has sufficient flexibility to meet the needs of rural hospitals. Earliest possible effective date is 1/1/83.

IMS LEGISLATIVE COMMITTEE

The Society's Legislative Committee will confer December 1 to review proposals likely to come before the 1983 General Assembly and to set IMS priorities for the coming session.

IMS/AETNA ANNUAL REPORT

Aetna representatives indicated satisfaction with the six-year growth of the IMS/Aetna Liability Insurance Program during presentation of the 1982 annual report October 27 to the Society's Medico-Legal Committee. The number of IMS/Aetna insureds is expected to pass the 1,300 level in 1983. Premium information for 1983 will appear in the November IMS UPDATE.

MEMBERS SERVICES

Expanded benefits options under the IMS Statewide Physicians Health Program will be considered in November at a meeting of the IMS Committee on Member Services.

CME CREDIT

Treatment of Alleged Sexual Abuse: A Multi-Hospital Study

RICHARD M. CAPLAN, M.D.,
CHARLES DRISCOLL, M.D., and
JENNIFER COFER, M.A., R.R.A.

DURING 1979, as a part of a commitment to participate in various statewide patient care evaluation studies, 9 Iowa hospitals studied their emergency room care for patients presenting because of alleged sexual abuse. The total number of beds in the 9 participating hospitals was 3,084, with an average of 343. The statewide study was conducted by the Iowa Foundation for Medical Care, serving as Iowa's Professional Standards Review Organization (PSRO).

The objectives of the study were:

1) *to assure that hospitals are properly prepared to treat sexually abused patients,*

This is the fifth in a series of Continued Education/Shared Study Reports. It is based on patients presenting because of alleged sexual abuse in 9 Iowa hospitals. Problems identified include the absence of written protocols; limited documentation of the circumstances; inadequate collection of laboratory evidence, and insufficient counseling about venereal disease or pregnancy.

You will find a special two-page insert with this report. It is an 8-question quiz. By completing and mailing it with \$3 to the Iowa Foundation for Medical Care you may earn one credit hour in Category 1 for the Physician's Recognition Award of the American Medical Association. The quiz will be evaluated and returned to you with appropriate comments.

This education project is a joint service of the Foundation, University of Iowa College of Medicine and the Iowa Medical Society.

2) *to assure appropriate documentation of treatment given to patients in the emergency room, and*

3) *to assure proper collection of evidence for legal proceedings.*

All patients, of either sex and any age, treated for alleged sexual abuse in an emergency department were studied, whether they were admitted to the hospital or not. The study period was January 1, 1978, to December 31, 1978, or the first 25 such patients treated at each participating hospital during that time. Only one hospital reported as many as 25 patients.

STUDY POPULATION

The study reported the care of 94 patients, 2 of whom were male. The patients (age range 4 to 85) were cared for by 53 physicians. In addition to assessing

(Please turn to page 450)

The physician authors are members of the Continuing Medical Education Committee of the Iowa Foundation for Medical Care. Appreciation is extended to these other members of the IFMC committee: Stanley Greenwald, M.D., Francis L. Pisney, M.D., Ronald Reider, M.D., Harold Van Hofwegen, M.D., and Michael J. Richards, M.D.

the physicians' involvement in patient care, nonphysician participation in this study included nursing service (7 instances), social service (3 instances), and laboratory (5 instances). Various problems were found in all 9 hospitals, and appropriate corrective action was initiated. For hospitals not participating in this study, a review of this report should be useful in efforts to improve the quality of care provided to sexually abused patients.

CME/SSR

No. 5 in a Series

Criterion No. 1 — Written Protocol

This criterion specified that a patient coming to the emergency department following an alleged sexual abuse should receive treatment in accordance with the hospital's written protocol. (*The Joint Commission on Accreditation of Hospitals now requires such a written protocol as a condition of accreditation.*) Obviously, this criterion is to assure that hospital emergency rooms indeed have written protocols to guide treatment for patients in this category. A written protocol is especially valuable in dealing with those relatively infrequent events that tend to be laden to an unusual degree with emotional overtones and legal requirements. Among the 9 hospitals, 3 did not have written protocols. They have since taken action to provide protocols.

Criterion No. 2 — Documentation

This criterion seeks to insure documentation of a variety of important matters as follows:

A. *Informed consent is obtained to perform the examination and provide treatment.* There were 27

variations. Five variations were justified (mainly indicating informed consent was obtained from appropriate legal substitutes), leaving 6 hospitals with 22 deficiencies (23% of the patients!).

B. *If the patient consents, the police are notified.* Twelve variations occurred, and 8 deficiencies were identified in 2 hospitals, all arising from the lack of documentation about any action on this point. Corrective action involved developing an approved protocol with an appropriate record form.

C. *The history is recorded in the chart in the patient's words and in the presence of a chaperone-witness.* Fifty-eight variations were found to include 38 deficiencies (40% of the patients) in 5 hospitals. These related to inadequate description of the assailant, time of attack, whether orgasm or ejaculation was known to have occurred, and whether or not a condom was used. All these considerations should be part of an appropriate protocol and should be present in the record. The medical and legal reasons for such information are obvious. Corrective action was taken appropriately, largely centered on staff education and developing a satisfactory protocol with its related forms.

D. *The physical examination is to be recorded with indication that it has been made in the presence of a chaperone-witness.* The examination was to include both a general and genital examination with detailed description of the findings. Thirteen variations were found, 7 of which were termed deficiencies — either incomplete examination or lack of comment. Corrective action was initiated in the four hospitals involved.

E. *Clothing is to be saved so that it can be labeled and personally*

turned over to police in return for a detailed receipt. Forty-seven variations occurred, but 30 of them were justified by virtue of clothing not being brought to the hospital with the patient, either because the patient changed clothing before coming to the hospital or because the clothing had been washed or burned. Seventeen identified deficiencies occurred among 7 hospitals, and corrective action was taken through protocol implementation and staff education.

F. *Specimens are taken for laboratory examination and should have included hair combed and cut from the pubic area, a specimen of vaginal fluid, gonococcal culture from cervix, nose or mouth (unfortunately, rectum was omitted from the distributed instructions), debris from beneath the fingernails, dried secretions scraped from skin and hair, blood for serological examination and urinalysis for pregnancy test.*

The number of variations was 71. The 37 deficiencies involved both failure of documentation and performance in 5 hospitals. The potential that 39% of possible legal cases would have inadequate evidence is clearly a serious problem. Corrective efforts were begun in the 5 hospitals through protocol implementation and staff education.

G. *After laboratory specimens have been collected, prophylactic treatment is to be offered and pregnancy prevention discussed, if appropriate.* If prophylactic treatment is given it should consist of 4.8 million units of aqueous procaine penicillin intramuscularly along with one gm of oral probenemid; or tetracycline, 500 mg by mouth 4 times daily for 5 days; or ampicillin 3.5 gm orally in one dose along with one gram of oral probenemid; or spectinomycin hydrochloride, 2 gm intramuscularly in one dose. A total of 60 variations disclosed 42 deficiencies. To be 45% deficient

TREATMENT OF ALLEGED SEXUAL ABUSE

Continuing Medical Education Credit Quiz

This learning experience is intended for all Iowa physicians. When the learner has read the preceding article, he/she will have basic information on the treatment of alleged sexual abuse.

One hour of continuing medical education credit (AMA Category I) is offered to those who read this article and answer the questions. Please answer the questions and submit them with the information requested. Simply (1) check the correct answers; (2) enter the information requested; (3) remove this page from the JOURNAL; (4) prepare a check for \$3 to cover administrative costs and make payable to the University of Iowa; and (5) mail the quiz and check to the Iowa Foundation for Medical Care, Colony Park, Suite 500, 3737 Woodland Avenue, West Des Moines, Iowa 50265. You will be provided a report on your quiz and a confirmation of the CME credit.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Iowa College of Medicine designates this CME activity as meeting the criteria for one credit hour in Category I for education materials for the Physician's Recognition Award of the American Medical Association provided it has been completed according to the instructions.

PLEASE ANSWER THE FOLLOWING QUESTIONS (Choose the one best answer)

1. Sexual abuse of persons below age 14 is uncommon.
☐ A. True
☐ B. False
 2. To conform with the law on child abuse, a report should be made to the Department of Social Services if the patient (of either sex) is under age 14.
☐ A. True
☐ B. False
 3. Inadequate documentation is a more serious deficiency in alleged sexual abuse than in many other medical problems because of the serious legal implications for the accused and the accuser.
☐ A. True
☐ B. False
 4. A written protocol should be readily available at the hospital and followed scrupulously.
☐ A. True
☐ B. False
-

5. The recorded history should avoid use of the patient's own words.

- ☐ A. True
☐ B. False

6. The entire interview and examination of the patient should be done in the presence of a witness.

- ☐ A. True
☐ B. False

7. Which of the following specimens should be obtained?

- ☐ A. Hair combed and cut from pubic area
☐ B. Vaginal fluid
☐ C. Cultures for gonococci (cervix, rectum, nose, mouth)
☐ D. Debris from beneath fingernails
☐ E. Any dried secretions
☐ F. Urine for pregnancy test (in women of child-bearing age)
☐ G. All of the above

8. Prophylactic treatment for venereal infection should be offered, and the regimen to be preferred is (choose the best answer):

- ☐ A. 4.8 million units of aqueous penicillin I.M. with 1 gram of oral probenemid
☐ B. Tetracycline, 500 mg. orally qid for 5 days
☐ C. Ampicillin, 3.5 grams orally as a single dose along with 1 gram of oral probenemid
☐ D. Spectinomycin hydrochloride, 2 grams I.M. as a single dose
☐ E. All of the above

PLEASE DO THE FOLLOWING IN ORDER TO RECEIVE CREDIT:

1. Be sure your answers are indicated in the boxes provided.
2. Remove this page from the JOURNAL.
3. Make a check for \$3 payable to the University of Iowa to cover administrative costs.
4. Insert the information requested below.
5. Mail this page and check to Iowa Foundation for Medical Care, Colony Park, Suite 500, 3737 Woodland Avenue, West Des Moines, Iowa 50265.

NAME _____

ADDRESS _____

SOCIAL SECURITY NUMBER _____

TELEPHONE NUMBER _____

clearly indicates the medical staffs did not have the risk of venereal infection sufficiently in mind. The 5 hospitals in which deficiencies occurred instituted corrective action through staff education, protocol update, and use of examination forms.

H. *A report is to be made to the social services department concerning patients less than 14 years old.* Seventeen variations that included 15 deficiencies were identified by the local review committees of 5 hospitals. Action was taken to establish and follow protocol procedures.

Criterion No. 3 — Support and Counseling

Criterion three specifies that emotional support and counseling should be offered early in the treatment process to the patients and/or significant others. A total of 42 variations included 40 deficiencies in 8 hospitals, most of which were due to lack of any recorded comment concerning this criterion.

DISCUSSION

Many of the problems in this study were of the kind customarily found in our statewide studies. For example, not all records personnel and certainly not all hospital audit committees yet understand the basic language and logic of performing medical audit. As a result, we find the various terms (variations, justifications, and deficiencies) applied in highly variable fashion among the local review committees. This makes it difficult to prepare a statewide

compilation. Also, physicians and other personnel fail to perform all of the appropriate action steps, and they correspondingly fail at times to make necessary entries into the records. As always in a record audit, there is no way to distinguish whether absent entries represent failure to perform or only failure to document.

But apart from the generic problems of statewide audits, there were specific problems of large dimensions, namely, (1) lack of a written protocol in one-third of the hospitals, (2) inadequate documentation of history in 40% of the patients, (3) laboratory evidence not properly collected in 39%, and (4) 45% of the patients receiving insufficient care or counseling regarding the possibilities of venereal infection or pregnancy. Such a level of problems was found in relatively large hospitals with JCAH accreditation; one can only speculate what magnitude of problems might there be in smaller or unaccredited institutions.

Halbert and Jones¹ have published a fine description of the care to provide and the procedure to follow in cases of alleged sexual abuse. They emphasize, because it is generally the most needed, the care of the female victim abused by the male. Although the reported number of abused males is far less (2% in this series), the problem exists and warrants corresponding diligence and sensitivity as described recently by Josephson.²

Sexual abuse has been increasingly recognized among the manifestations of the broad

problem of child and spouse abuse. Among the 94 patients studied here, 40 (43%) were under 14 years of age. Orr³ has emphasized that seeking help for intrafamilial childhood sexual abuse is often forsaken by the family (usually the mother) in an attempt to maintain stability in an already shaky family structure. He says, "It is imperative that one understand the resistance that is frequently encountered in treating these families and not be misled into

CME/SSR No. 5 in a Series

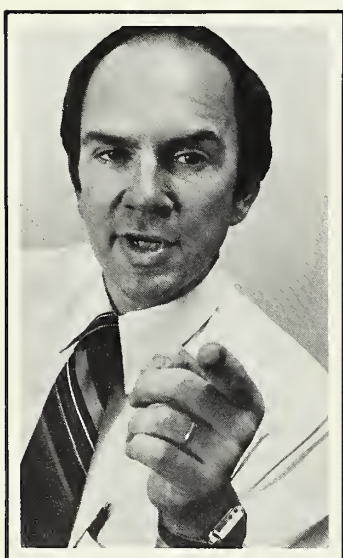
underestimating the severity of the familial disturbance."

Because of the particular emotional, social and legal complexities of alleged sexual abuse, all hospitals must have written protocols available in emergency rooms. Health personnel must make sure that for each patient presenting with this complaint *all* the items in the protocol are accomplished and appropriate entries are made into the record. It is gratifying that participating hospitals have taken appropriate action to introduce suitable protocols, fortify their use, or both.

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3. Orr, D. P.: Sexual abuse of children. *New Eng. J. Med.*, 303:163, 1980.

"How am I supposed to control health care costs if you can't?"



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We continue to pursue cost containment efforts with the Iowa Medical Society, the Iowa Hospital Association, and other groups.

You can help, too. By using Iowa's health care system as wisely as possible.

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Iowa Hospice Programs: Expanding the Physician's Impact

MARILYN W. STORY, Ph.D.

University of Northern Iowa

Cedar Falls, Iowa

Hospice services now emanate in Iowa from 11 different points. At least 17 others are in different developmental stages. The goal of good liaison with Iowa physicians is stressed in this summary report.

HOSPICES PROVIDE palliative and supportive care for terminally ill patients and their families during terminal illness and the following period of bereavement. A medically supervised, hospice trained interdisciplinary team of professionals and volunteers is available to provide services 24-hours-a-day, 7-days-a-week. In a comprehensive hospice program, services are available in both the home and an inpatient setting. Emphasis is placed on symptom control and support before and after death to help ease the physical, psychological, social and spiritual discomforts attendant to terminal illness and death.

While hospice care for the terminally ill has been widely used in the United Kingdom for over 100 years, the first United States hospice was formed in 1971 at New Haven, Connecticut.

The author is vice president of the Iowa Hospice Organization and is an associate professor in the Department of Home Economics at the University of Northern Iowa.

cut. It began providing care to patients and their families in March, 1974. The United States hospice movement has grown rapidly since 1974, and now reaches every state. Dr. Josefina Magno, executive director, National Hospice Organization, calls 500 a conservative number for U.S. hospice programs either already established or being developed.¹ Iowa has 11 hospices providing services and at least 17 others in development (See Tables 1 and 2 for names and addresses of Iowa hospice groups).

MEDICAL CARE IN HOSPICE

Hospice is a medically supervised program which supports physicians as well as patients and their families. Hospice leaders want the family physician to continue as the primary doctor when the patient enters hospice care. This provides continuity of care for the patient and family and lessens the fear of either being deserted or not understood in the terminal illness.

For the physician, hospice care should not be seen as an alternative to established medical practice, but as an addition that widens the therapeutic approach and improves the total success in helping the patient and family. The hospice medical director does not replace the primary physician. He/she rather aids him/her by being on 24 hour call, and by participating in weekly staffing meetings of the interdisciplinary patient care team. This way information can be relayed between the team and the primary physician, with the hospice medical director serving as a resource specialist in pain

THE IOWA MEDICAL FOUNDATION HAS DESIGNATED THIS ARTICLE AS THE HENRY ALBERT
SCIENTIFIC PRESENTATION FOR THE MONTH OF NOVEMBER 1982

and symptom control for the primary physician. Similarly, the interdisciplinary hospice team can function as an extension of the physician in carrying out good holistic medical care for the terminally ill.

Dying patients and their families fear pain, which includes not only physical pain, but also mental, financial, interpersonal, social and spiritual pain. They also fear physical and psychological isolation and lack of personal control in many aspects of their lives. A trained hospice team of nursing, social services, pastoral counseling and volunteer personnel is a valuable aid in treating the patient in relation to his/her total environment. When terminally ill patients receive such holistic care, they are less anxious and require smaller quantities of

analgesics for pain control. Studies at St. Joseph's Hospice in London and Royal Victoria Hospital Hospice in Montreal both found that hospice patients obtained significantly more pain relief from the same amount of analgesics than did similarly diagnosed patients in hospital acute care units.

The National Hospice Organization lists as its first Standard of Care "appropriate therapy is the goal of hospice care."² Hospice sees appropriate medical care as always a blend of curative and palliative therapy. Its medical care strives for the greatest degree of relief from distress caused by disease for the longest period of time with the least number of distressing therapy-related side effects.

The physician must weigh the relative value of 1) the benefits from curative therapy; 2) the toxicities of that therapy, and 3) the risks of not treating the disease directly. If cure-oriented therapy has a higher risk of causing physical, psychological, social or spiritual distress than of inducing a state of disease remission or control, the patient deserves the option of palliative care. Thus, the hospice concept never means cessation of medical care but rather the consideration of care alternatives to fully maximize the quality of time left to the patient, rather than merely postpone death.

INFORMED CONSENT

Under the legal doctrine of "informed consent," physicians have the same duty to discuss the prognosis and treatment alternatives with a dying patient as with a non-terminal patient. Both patients have the same right to accept or reject treatment, and the physician is liable for failure to make proper disclosure. Legal confrontations can be avoided by open discussion among the physician, patient and family. While most physicians believe they have such communication, terminally ill patients and their families often do not remember an explanation of the diagnosis or treatment options. This disparity may occur because the patient and family are not ready to hear the information, do not understand the physician and are afraid to ask questions, or a variety of other reasons. A trained hospice team member speaking with the patient and family can help the physician to know if his communication is understood and help the patient and family understand the facts as reported by the physician.

(Please turn to page 455)

TABLE 1
PROVIDERS OF HOSPICE SERVICES
IN IOWA

AMES	Ames Visiting Nurse Service Mory Greeley Hospital Ames, Iowa 50010
BOONE	Boone County Hospice Rt. 1, Box 206 Ogden, Iowa 50212
CEDAR RAPIDS	Hospice of Mercy Mercy Hospital 701 10th Street, S.E. Cedar Rapids, Iowa 52403
CRESTON	Green Valley Hospice 808 W. Adams Creston, Iowa 50801
DAVENPORT	Hospice Core Group, Inc. St. Luke's Hospital 1227 E. Rusholme Davenport, Iowa 52803
DES MOINES	Hospice of Central Iowa 4211 Grand Avenue Des Moines, Iowa 50312
GRINNELL	Grinnell Hospice Grinnell General Hospital 4th and Reed Grinnell, Iowa 50112
IOWA CITY	Iowa City Hospice 117 Glen Drive Iowa City, Iowa 52240
OSKALOOSA	Hospice of Mahosko County 510 4th Avenue, E. Oskaloosa, Iowa 52577
SIoux CITY	Morion Health Center St. Joseph Unit 2101 Court Street, P.O. Box 3168 Sioux City, Iowa 51104
WATERLOO	Cedar Valley Hospice Schoitz Memorial Hospital Kimball and Ridgeway Waterloo, Iowa 50701

TABLE 2
DEVELOPING HOSPICES IN IOWA

CLINTON	Agnes Edwards Jane Lamb Memorial Hospital 638 S. Bluff Blvd. Clinton, Iowa 52732
DUBUQUE	Dubuque Hospice Group 3170 Asbury Road Dubuque, Iowa 52001
ESTHERVILLE	Meriam Lemans Haly Family Hospital Estherville, Iowa 51334
FORT DODGE	Marie Miller, R.N. Trinity Regional Hospital Fort Dodge, Iowa 50501
HAMPTON	Jennie Terrill Franklin County Hospice Rural Route Hampton, Iowa 50441
LAKE CITY	Virginia Curry, R.N. Stewart Memorial Comm. Hospital 1200 W. Manrae Lake City, Iowa 51449
LAUREL	Darathy J. Nuese Box 22 Laurel, Iowa 50141
MARSHALLTOWN	Elizabeth Weitzel Marshalltown Community Hospice Planning Group 1604 S. 5th Street Marshalltown, Iowa 50158
MASON CITY	Hospice of Mason City North Iowa Medical Center 910 N. Eisenhower Mason City, Iowa 50401
MUSCATINE	Patty Tysan Muscatine General Hospital Muscatine, Iowa 52761
OGDEN	Linda Carlsan OR Sheryle E. Lester 432 S.E. 2nd Ogden, Iowa 50212
OTTUMWA	Judy N. Masan 259 E. Galf Avenue Ottumwa, Iowa 52501
PELLA	Pat Van Zante 1014 W. 3rd Pella, Iowa 50219
PERRY	Laurine I. Natalie 2510 N. First Perry, Iowa 50220
REDFIELD	Kay Wahlert Redfield, Iowa 50233
SHENANDOAH	Shirley Males Pioneer Hospice Rt. 1, Box 192 Shenandoah, Iowa 51601
WEBSTER CITY	Hospice of Care of Hamilton County Box 317 Webster City, Iowa 50595

The Iowa Hospice Organization began in April, 1981, and officially elected a board of directors in October, 1981. The board includes Donald Bomkamp, M.D., of Cedar Rapids, and Wendell Stone, a former member of the Iowa Medical Society administrative staff.

The new organization hopes to develop understanding and support of the hospice concept among health care professions and the general public. It wishes to be a state resource/research center and give information and technical assistance to hospice groups throughout Iowa. To help accomplish these purposes, the Iowa Hospice Organization is publishing a periodic newsletter for members and others interested in Iowa hospice programs. To promote high quality hospice care in the state, the organization has adopted Hospice Provider Membership Standards which Iowa hospices must meet by April 1, 1983, in order to be Iowa Hospice Organization provider members. The Iowa Hospice Organization also monitors/responds to hospice-relevant health care legislation/regulation and ensures representation and input of Iowa hospice providers to the National Hospice Organization. This national organization recently formed an Organization of Hospice Physicians for peer support and professional upgrading of its members.

Another important purpose of the Iowa Hospice Organization is to sponsor state educational meetings. To date, programs have been held in April and October, 1981 and April, 1982. All programs have offered CME credits and featured a variety of resource people, including Richard Lamerton, M.D., director of St. Joseph's Hospice in London, and William Lamers, M.D., a founder of Hospice of Marin in California and currently director of the hospice in Calgary. The Iowa Hospice Organization hopes to be a source of information and support for all Iowa physicians involved in holistic care of the terminally ill. If you have questions, or wish more information on Iowa Hospice Programs, please contact the hospice in your area or Dr. Marilyn Story, vice president, Iowa Hospice Organization, 205 Loma Street, Waterloo, Iowa 50701.

REFERENCES

1. The Hospice Concept of Care: An Interview with Josefina Magno, M.D. in *Hospice Care* edited by National Health Standards and Quality Information Clearinghouse. Kensington, Maryland: NHSQIC, 1981, 10-16.
2. National Hospice Organization. *Standards of a Hospice Program of Care*. Washington, D.C.: National Hospice Organization, 10, 1979.

Oral Contraceptives And Reproductive Organ Cancer Risk

ELAINE M. SMITH, Ph.D., and

MICHAEL P. CORDER, M.D.

Iowa City, Iowa

This summary indicates use of oral contraceptives offers a reduced likelihood of development of ovarian and endometrial cancer. The findings on which this is based were drawn in part from the Iowa SEER (Surveillance, Epidemiology and End Results) Program.

AN EIGHT geographic region study employing population-based cancer registries across the United States identified women, aged 20-54 years of age, with newly diagnosed breast, ovarian or endometrial cancer. The study also identified women of the same ages without cancer, but from the same geographic areas. The Iowa SEER Program (Surveillance, Epidemiology, and End Results) was a major participant in this study. The SEER Program had been previously endorsed by the Iowa Medical Society. Iowa physicians were contacted by the study to obtain their permission to contact individual patients for in-depth interviews provided it was felt to be medically sound.

The initial analysis of this on-going, multi-center case control study indicates that women who have used oral contraceptives are approximately half as likely to develop ovarian and

endometrial cancer as women who have never used them. Despite previous concerns, contraceptive use does not appear to increase a woman's risk of breast cancer.

The relative risk* for ovarian cancer for women using oral contraceptives for at least one month compared to women who had never used them was 0.6. There was a correlation between the longer the woman had used the oral contraceptives and a lower risk of ovarian cancer.

The relative risk of endometrial cancer for women using combined oral contraceptives was 0.5. Women who had used sequential oral contraceptives appeared to have an increased risk of endometrial cancer. The protective effect was limited to women who had used the combined oral contraceptives for one year or longer and was also concentrated in nulliparous women.

The relative risk of cancer of the breast for women who had used oral contraceptives was 0.9. There was no evidence that long term oral contraceptive use of more than 10 years increased the risk of breast cancer. In addition, there was no indication of any increased risk of breast cancer due to oral contraceptive use for high risk women such as those with positive family histories or previous biopsies for benign breast disease.

This is a very large study and biases are unlikely to account for the findings of this study. The implications of this study could have a major public health impact. The reduced risk of cancer in women using oral contraceptives could prevent over 1700 cases of

Dr. Smith was principal investigator for the Iowa segment of this study. Dr. Corder is associate professor of medicine, preventive medicine and environmental health, University of Iowa. He is also chairman of the Iowa Medical Society Committee on Oncology.

* The relative risk for the entire unexposed female population would be 1.0.

ovarian cancer and 2000 cases of endometrial cancer in the United States each year.

This study was published in preliminary

form in the July 30, 1982, issue of *Morbidity and Mortality Weekly Report* from the Centers for Disease Control.

QUESTIONS-ANSWERS

(Continued from page 445)

medical students and residents. It is vital that we continue to train high quality people and our hope will be that more of these individuals whom we train will be interested in a career in academic surgery. We feel that the quality of surgery in the State of Iowa is superb, and our immediate goals will be to produce academic surgeons.

If you were predicting what's ahead in surgery, say 15 or 20 years, what do you think you'll see?

In 15 or 20 years the surgery practice in an academic center will be somewhat different. I would envision that almost a third of the surgery performed will be organ transplanta-

tion. Major trauma will still be taken care of in an academic center although this will be carried out as well in hospitals throughout the state. Cardiac surgery, particularly unique operations, will be carried out at the academic center as will the more difficult and newer neurosurgical procedures. Microvascular surgery will be developed to the fullest extent. Congenital cardiac surgery will continue to be important, as will congenital pediatric surgery. Surgical oncology, including immunotherapy and combined immunotherapy-chemotherapy and irradiation therapy, will be developed in a more refined way. I would envision replacement of organs containing tumors will occur routinely once the problems of rejection and prevention of metastases are solved. I think the next two decades in surgery will be exciting, and we are looking forward to being at the forefront in its development.

CLARKSON MEDICAL LECTURE SERIES



"Advances in Cardiovascular Disease"

Friday, November 19, 1982
Clarkson Hospital Storz Pavilion

8:00- 8:30 a.m.	Registration and Introduction		
8:30- 9:15	"New Aspects of Antianginal Therapy"		
9:15- 9:45	"Coronary Angioplasty — Role in Ischemic Heart Disease"	3:00- 3:30	3. Echocardiograms.
9:45-10:00	Coffee Break		4. Holter monitoring.
10:00-10:45	"Coronary Artery Disease, operate or medicate?"	3:30- 4:15	5. Exercise Testing.
10:45-11:30	"New Concepts in Hypertension and Antihypertensive Therapy"	4:15- 5:00	Coffee Break and Demonstrations
11:30-12:00	Break		"New Aspects of Management of Acute Myocardial Infarctions"
12:00- 1:00	Grand Rounds: "Cardiac Transplantation"	5:00	"Post-operative Care and Followup of the Patient after Cardiac Surgery"
1:15- 2:00	"The New Implants: Defibrillators, Valves, Pumps"		Adjournment
2:00- 3:00	"Understanding Diagnostic Techniques in Cardiovascular Medicine": 1. Doppler detection of peripheral vascular disease. 2. Nuclear cardiology.		

DINNER DANCE: Peony Park Ballroom
Social Hour 7:30 p.m. Dinner 8:30 p.m.

Featured speakers include:
C. Walton Lillehei, M.D., Ph.D.
James R. Pluth, M.D.

Bishop Clarkson Memorial Hospital
44th & Dewey Ave., Omaha, NE 68105



COMMENTING EDITORIALLY

MARION E. ALBERTS, M.D.
SCIENTIFIC EDITOR

A RENEWAL OF CONCERN

SEVERAL YEARS AGO THE JOURNAL set about to establish a new tradition. This was to direct one issue each year to our patients. It is appropriate for this November issue to be so dedicated in a spirit of thanksgiving as well as reaffirmation. This month our editorial content has items of interest to physicians and also to patients and others. It is our hope many patients will have a chance to see this issue. Please read it and then place it in your reception area.

Delivering medical care is often a complex and bewildering way of life. Much has been said about the physician-patient relationship — some of it in praise of the physician; some in a derogatory vein. Sympathy is an important part of the physician-patient equation. It is sometimes called the art of medicine; the essence of the practice of medicine. A physician may have learned a great deal, yet be profoundly unskilled in his/her relations with a sick person. The physician who confines his/her attention to the body only does not grasp fully the essence of medicine. It is through a

CREATE ZELLWEGER FUND

The Hans U. Zellweger Pediatric Education Fund is being established by the University of Iowa Foundation and the U. of I. Department of Pediatrics. Dr. Zellweger was named professor emeritus of pediatrics in 1977 after 23 years of service at the University.

Dr. Zellweger expects to reduce his clinical responsibilities this year to devote more time

soothing and calming approach to the fears of the sick that the physician can gain the confidence and the esteem of those he/she treats. Yes, even the love of his/her patient. John Bard (1716-1799) made these observations, and the passage of time over two centuries has not changed their significance. Too often a patient is referred to as a "case"; that is not so, for the patient is a "living, palpitating, alas, too often suffering fellow creature." (John Brown, 1810-1882, quoted in LANCET, 1:464, 1904)

Time has changed our relationships with the ill and suffering. In years past the physician related directly to the patient and family in most aspects of health care. He/she cared for the sick ones, dispensed a limited number of drugs and potions, and sat with the patient and family when nothing more could be done. Today, there are complex health centers, super specialties, exotic and complex treatment modalities, and the involvement of many ancillary health care personnel, all to provide more complete and often very complex medical service.

The economics of the health care system have likewise changed greatly with the involvement of third parties. We live with insurance and governmental intervention. It is no wonder that often the patient becomes bewildered.

All this, however, should not diminish the compassion and the true concern of the physician for the patient. As we dedicate this issue of the JOURNAL to the patient, let us physicians reaffirm our concern for the welfare of our fellow humans. Humane attention to their needs, including a sincere effort to halt the spiraling cost of medical care, should be our concern. Health care service is complex; all of our society is much more complex. We must all work together for the good of the individual and the populace. — M.E.A.

to writing and performing other personal and professional activities.

The Swiss-born physician worked with Dr. Albert Schweitzer in the 1930's before returning to the University of Zurich for postgraduate pediatric training. He came to the U. of I. in 1959 and subsequently founded the division of medical genetics. It was one of the first U.S. clinical laboratories to study human chromosomal problems.



OUR MAN ON EDUCATION

RICHARD M. CAPLAN, M.D.

WHAT DOES "MEDICAL" INCLUDE OR EXCLUDE?

PERHAPS YOU haven't given it much thought before. If you haven't, this might be a good time to ponder what is and ought to be included, and excluded, by the word "medical" in the phrase, continuing medical education. The issue arose at a recent meeting of the Accreditation Council for CME, a voluntary national body that is sponsored by major organizations concerned with the quality of CME. Because I presently serve on it as a representative of the Association of American Medical Colleges, the problem faced me when I had to vote on a definition.

Until mandatory CME arrived, with its important corollaries of membership and licensure dependent on the amount and type of CME, a debate about what might properly be termed "medical" was pretty academic — what might be termed a nice example of trichoschizophilia. (In case your Greek is half-a-hair's-width less than mine, that wonderful term translates to "love of hair-splitting"). Whether the alleged item of education dealt with medical content for use that very day in office or hospital, or involved research reports, or medical history, or speculation on future therapeutic possibilities, or how to run a clinic, or how to teach those who study medicine, or how to improve the speed and accuracy of billing procedures, or how to choose tax shelters or plan retirement, or how to tune a piano, fix a roof, enjoy a painting, shampoo a horse —

Dr. Caplan is Associate Dean for Continuing Medical Education at The University of Iowa College of Medicine.

if the content dealt with health, disease, diagnosis or treatment, or if the target audience was physicians, then it was CME and nobody (except the IRS) cared much. But when many others got into the act of judging the nature and content of the learning and the method of its presentation, then things got sticky.

What the issue boiled down to for the ACCME, ultimately, was a choice between a narrow and a wide definition. The Californians, full of liberality about so many things, yet simultaneously angered by so much liberality and eager to stifle abuses, pushed for this narrower meaning:

"CME consists of those continuing educational activities which relate directly to patient care, community and public health or preventive medicine."

The AMA House of Delegates had considered that definition and ultimately, through their staff and committee process, adopted a broader definition:

"CME is composed of any education or training which serves to maintain, develop or increase the knowledge, interpretive and reasoning proficiencies, applicable technical skills, professional performance standards or ability for interpersonal relationships that a physician uses to provide the service needed by patients or the public."

The proposed ACCME definition was essentially the same, but added the words "or the profession" to the end of the sentence. Both the California and the AMA/ACCME definitions add words to exclude courses such as "Selling Ouija Boards for Fun and Profit — Exclusive Franchises for Retired Medical School Deans."

When the issue came before the ACCME, I voted — you'll not be surprised — for definition two. I've got a lot of confidence in my fellow physicians.

U. of I. COLLEGE OF MEDICINE COURSES & CONFERENCES

November 19	Surgery Postgraduate Conference: Cost Effective Approach to Surgical Issues
November 19	VIII Annual Childhood Cancer Workshop
November 19-20	Advanced Trauma Life Support
November 20	Cancer Teaching Day
December 1	Ophthalmology Clinical Conference
December 3-4	Iowa-Western Illinois Neurological Association

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One of man's most amazing explorations and scientific adventures, the successful Gemini flight program was a triumph of imagination and—teamwork. Two men learned to operate in space, to rendezvous, to dock, and to work outside their spacecraft in the hard vacuum of outer space. Not only did they coordinate their efforts with ground backup, they also complemented each other's activities within the close confines of the space capsule.



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LAMBERT**

* Meeting of Am Soc Colon/Rectal Surgeons, May 1980

** Based on total prescriptions filled for hemorrhoidal preparations during the first three quarters of 1981. The National Prescription Audit, IMS America Ltd, Sept 1981.

† 1981 data from leading marketing research organization.

ANUSOL-HC[®] Suppositories/ ANUSOL-HC[®] Cream

Before prescribing, please see full prescribing information. A Brief Summary follows:

Indications and Usage: Anusol-HC Suppositories and Anusol-HC Cream are adjunctive therapy for the symptomatic relief of pain, itching and discomfort in external and internal hemorrhoids, proctitis, papillitis, cryptitis, and fissures, incomplete fistulas, pruritus ani and relief of local pain and discomfort following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present. After acute symptoms subside, most patients can be maintained on regular Anusol[®] Suppositories or Ointment.

CONTRAINDICATIONS

Anusol-HC Suppositories and Anusol-HC Cream are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparations.

WARNINGS

The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy, they should not be used unnecessarily on extensive areas, in large amounts or for prolonged periods of time.

PRECAUTIONS

General

Symptomatic relief should not delay definitive diagnoses or treatment.

Prolonged or excessive use of corticosteroids might produce systemic effects.

If irritation develops, Anusol-HC Suppositories and Anusol-HC Cream should be discontinued and appropriate therapy instituted.

In the presence of an infection the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly, the corticosteroid should be discontinued until the infection has been adequately controlled.

Anusol-HC is not for ophthalmic use.

Pregnancy

See "WARNINGS"

Pediatric Use

Care should be taken when using the corticosteroid hydrocortisone acetate in children and infants.

DOSEAGE AND ADMINISTRATION

Anusol-HC Suppositories—Adults: Remove foil wrapper and insert suppository into the anus. Insert one suppository in the morning and one at bedtime for 3 to 6 days or until inflammation subsides. Then maintain comfort with regular Anusol Suppositories.

Anusol-HC Cream—Adults: After gentle bathing and drying of the anal area, remove tube cap and apply to the exterior surface and gently rub in. For internal use, attach the plastic applicator and insert into the anus by applying gentle continuous pressure. Then squeeze the tube to deliver medication. Cream should be applied 3 or 4 times a day for 3 to 6 days until inflammation subsides. Then maintain comfort with regular Anusol Ointment.

NOTE: If staining from either of the above products occurs, the stain may be removed from fabric by hand or machine washing with household detergent.

Store between 59°-86°F (15°-30°C)
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DRUG THERAPY REVIEW



UNIVERSITY OF IOWA HOSPITALS AND CLINICS

REYNOLD SPECTOR, M.D., Editor

CIS-PLATINUM IN CANCER CHEMOTHERAPY: A SIGNIFICANT ADVANCE

CIS-PLATINUM (platinum) has been recently introduced for the treatment of a variety of human malignancies. The addition of platinum to combination chemotherapy has made cure possible in the majority of patients with disseminated testicular cancer.¹ Platinum also appears valuable in combination therapy for disseminated ovarian cancer and is approved for use in this malignancy as well. In addition, platinum has activity against urinary bladder carcinoma, squamous cell cancers of the head and neck, and probably in both small and non-small cell lung cancer.

STRUCTURE AND MECHANISM OF ACTION

Cis-platinum, or cis-dichlorodiammine-platinum II, is one of a group of platinum coordination complexes which were first discovered in the 1800s. In 1965, Rosenberg *et al*

This information for Iowa physicians is furnished and sponsored by the University of Iowa Hospitals and Clinics.

found that cis-platinum inhibited the growth of *E. coli*, and in 1969 reported that platinum increased survival time and decreased tumor mass in mouse sarcoma and leukemia.² Thus far, the cis-coordinate has been found to have the greatest antineoplastic activity. It is marketed for clinical use by Bristol under the brand name of Platinol.

The mechanism of action of cis-platinum appears to be inhibition of new DNA synthesis via cross-linking of DNA strands, with a minimal effect on RNA and protein synthesis.³ Despite its inhibition of DNA synthesis, human cell culture studies demonstrate that it is not a phase-specific drug. Platinum may also work via inhibition of DNA repair or by enhancement of monocyte mediated cellular cytotoxicity.

PHARMACOKINETICS

Pharmacokinetic studies of cis-platinum in man have demonstrated the importance of binding to serum proteins and renal excretion. After intravenous infusion, plasma levels of cis-platinum decline in a biphasic manner: (1) a rapid or alpha phase with a $t_{1/2}$ of 20 to 50 minutes is associated with binding of the free drug to albumin, and (2) a slow or β -phase with an approximate elimination half-life of 67 hours. Binding to serum proteins is extensive (within 4 to 5 hours after administration, 97 to 98% of the dose is bound to albumin) and destroys the cytotoxicity. Thus only the free or unbound drug is pharmacologically active. Cis-platinum distributes into all tissues and is not consistently concentrated by the tumor. The major mode of drug elimination is by renal excretion. Up to 17% of the administered dose is excreted into the urine within the first 4 hours, and the drug can still be detected in the kidney as long as 4 weeks after therapy.

TOXICITY

The toxicities of cis-platinum include renal failure, myelosuppression, moderate to severe nausea and vomiting, peripheral neuropathy, and ototoxicity.⁴ Anaphylactic reactions have been reported in 4 of 107 patients given a total of 267 courses of cis-platinum and all were successfully treated with conventional measures. The dose-limiting toxicity of platinum has been nephrotoxicity. The nephrotoxicity is dose related, cumulative, and often not re-

versible. Pathologic findings are consistent with acute tubular necrosis. Concomitant administration of saline with and without mannitol diuresis is often effective in reducing or preventing cis-platinum induced renal damage.⁵ Such hydration should be given with every administration of platinum. The amount of hydration required depends upon the amount of dose given in any one injection. For example, doses of platinum of 20 mg/m^2 daily $\times 5$ require no greater than one liter per day while doses of 120 mg/m^2 in one bolus require 3 to 4 liters of IV fluids or more. These must be solutions of normal saline as cis-platinum is not stable in D5W or low chloride solutions.

Electrolyte abnormalities can occur secondary to platinum-induced renal abnormalities. Significant hypomagnesemia has been noted in 56% of patients.⁶ Hypocalcemia and hypokalemia have also been frequently observed. Careful monitoring of electrolytes within 24 hours of administration of the drug is always indicated and appropriate replacement therapy should be given.

Moderate to severe nausea and vomiting will occur in nearly all patients unless antiemetics are also given. The nausea and vomiting occur within one to 6 hours of administration and can persist for a week or longer. This nausea and vomiting generally are resistant to standard antiemetics such as the phenothiazines and is often so severe that patients cannot continue chemotherapy. Gralla *et al* have demonstrated that high-dose metoclopramide given intravenously is remarkably effective in blocking or reducing platinum-induced nausea and vomiting.⁷ With platinum doses greater than the $20 \text{ mg/m}^2 \times 5$ schedule, metoclopramide is nearly always needed, and it may be necessary in the lower dosage schedules as well.

Tinnitus, hearing loss and vestibular disturbances can necessitate discontinuation of therapy. Acute myelosuppression is not as severe as with many other neoplastic agents but can be severe if the patient has had extensive prior chemotherapy or radiotherapy. With more chronic administration, cumulative myelosuppression can become the dose-limiting factor. Similarly, peripheral neuropathy often becomes a problem with chronic administration.

Interactions, adverse or favorable, with other drugs have not yet been extensively re-

ported. Synergistic nephrotoxicity with gentamicin and gentamicin-cephalothin antibiotics has been reported. In animals, furosemide increased platinum-induced renal damage but no clear-cut reaction in man is reported. A single patient receiving antihypertensive medications (furosemide, hydralazine, propranolol, and diazoxide) was reported to develop nephrotoxicity with cis-platinum. It would appear prudent to avoid any other potential nephrotoxic agents when giving cis-platinum.

EFFICACY

Cis-platinum has been demonstrated to increase substantially the cure rate for disseminated germ cell tumors of the testes.^{7, 8, 9} In combination with vinblastine and bleomycin, platinum increased the complete response rate in disseminated testicular cancer to 74%. Patients who achieved only a partial response underwent surgical resection and another 11% of patients were rendered disease free. Subsequent follow-up in these patients has shown a very low relapse rate. The most commonly used regimen of these 3 agents is that originated by Drs. Einhorn and Donohue at Indiana University.⁹ Similar platinum combinations at other institutions have yielded comparable results.

The addition of platinum to regimens containing cyclophosphamide and adriamycin for stage III and IV ovarian carcinoma has been demonstrated to increase complete response rates. It is not clear at this time, however, if these platinum combinations will lead to a significant number of patients achieving long-term, disease-free survival.¹⁰

Gralla *et al* have suggested that vindesine and platinum in combination therapy will improve the survival of patients with lung carcinoma. Such investigations deserve further trials before they are considered accepted therapy. Similar promising investigations in bladder, head, and neck malignancies are currently under study.

COST

The cost for cis-platinum is about \$23.20 per 10 mg vial, so a 20 mg/m^2 dose for an average-sized adult would cost approximately \$100, and the platinum for an entire course of the

(Please turn to page 468)

STATE DEPARTMENT/ PUBLIC HEALTH

HOMEMAKER HOME HEALTH AIDE SERVICES

IOWA PHYSICIANS have shown interest and support for homemaker home health aide services since these programs began. We have reported the development of these Iowa services in the JOURNAL previously, most recently in the April 1980 issue. Significant changes in state funding and responsibility have been occurring in recent months. This further update will include a brief history, the special study and report to the General Assembly of January 15, 1982, the action of the legislature in 1982, and the progress of implementation.

Homemaker home health aide services are relatively new in the United States. The first program in Iowa was started in 1961 in Des Moines-Polk County with a grant from the U.S. Public Health Service. In the next five years additional programs were started in other counties with federal health funds channeled through the Iowa State Department of Health. In 1966 the Iowa Department of Social Welfare (now Department of Social Services) initiated a direct service program in Dubuque County. In 1967, the Office of Economic Opportunity began to help fund homemaker home health aide programs. Medicare also began to reimburse for some home health aide services to eligible clients. The various funding sources all contributed to the growth of these services.

This information on public health matters is furnished and sponsored by the Iowa State Department of Health.

By 1976 the goal was reached to have programs serving persons in all 99 Iowa counties. Physicians and physicians' wives were frequently key individuals in stimulating, guiding and supporting local programs. The organizational pattern and funding mechanisms varied from county to county. A report by the Department of Social Services in 1978 indicated the funding diversity. The primary funding sources reported were:

	Counties
Title XX — federal Social Service funds	99
Private patient payment	99
H.F. 597 — state funds through Health Department (New in 1977)	81
Medicare/Medicaid	67
County tax funds	43
Area Agency on Aging (federal funds)	36

A smaller number of counties also reported sources such as United Way and Veteran's Administration

The 1981 session of the Iowa General Assembly showed much interest in homemaker home health aide service. It urged use of appropriated funds efficiently and effectively. The Assembly passed the following mandate:

"The State Department of Health, the Department of Social Services, and the Commission on the Aging shall study jointly and make recommendations to the General Assembly by January 15, 1982 for an integrated state homemaker-home health aid program. In preparing the study the three state agencies shall include representatives of interested outside groups, including the Iowa Council for Homemaker-Home Health Aid Services, in the discussion and planning stages. The three state agencies, during the study and the preparation of the report, shall coordinate their respective homemaker programs, with the goal of developing a homemaker system as uniform and integrated as is practicable, using as guidelines a minimum of administrative monitoring of local programs, and a maximum of client services provided."

A special task force prepared a report which was submitted to the General Assembly on January 15, 1982. The task force established a standard definition of homemaker home health aide service. Three optional methods of
(Please turn to page 467)

state funding were explored. The option which allowed a high degree of local control within state standards was recommended. It was further recommended the program be administered by the Iowa State Department of Health.

After a public hearing and extensive committee discussion, the Assembly passed legislation to implement the task force recommendations. The key features of the legislation are:

1. The homemaker home health aide/chore appropriation of the Department of Social Services and the homemaker home health aide appropriation of the Department of Health are combined into a single homemaker home health aide appropriation administered by the Department of Health (approximately \$6,500,000 for FY 83).

2. The funds are offered as grants to the county boards of supervisors on the basis of a multi-factor formula.

3. The definitions of homemaker home health aide and chore are: "Homemaker home health aide services" means services intended to enhance the capacity of household members to attain or maintain the independence of the household members and provided by trained and supervised workers to individuals or families, who, due to the absence, incapacity, or limitations of the usual homemaker, are experiencing stress or crisis. The services include but are not limited to essential shopping, housekeeping, meal preparation, child care, respite care, money management and consumer education, family management, personal services, transportation and providing information, assistance, household management and learning experiences."

"Chore services" means services provided to individuals or families, who, due to absence, incapacity, or illness, are unable to perform certain home maintenance functions. The services include but are not limited to yard work such as mowing lawns, raking leaves, and shoveling walks; window and door maintenance such as hanging screen windows and doors, replacing window panes, and washing windows; and minor repairs to walls, floors, stairs, railings, and handles.

4. Each county *may* use up to 15 percent of its allocation to provide chore services.

5. The Department shall adopt rules for standards regarding training, supervision, recordkeeping, appeals, program evaluation, cost analysis, financial audits and reporting requirements. The rules shall also require each local agency to use a sliding fee scale for those persons able to pay for all or a portion of the cost of the services.

All 99 counties are participating in this program. The services are being provided by county agencies or sub-contracted to non-profit agencies. The SDH expects to have a staff of five professional persons to monitor and provide consultation to local programs. Obviously such a small staff will only monitor a small sampling of cases. The legislation is based on the concept of local professional and consumer involvement in establishing policies and priorities. It also depends on local persons actively evaluating the program to assess its appropriateness, adequacy, effectiveness and efficiency. Physicians continue to have an important dual role in requesting and following the delivery of these services for their patients and in serving on governing boards and advisory committees.

The coordinated efforts of physicians, public health nursing agencies, homemaker home health aide services and others can contribute much to both cost savings and enhanced quality of life.

An excerpt from a public health nurse's report demonstrates what is possible:

"Following the death of his 88-year-old wife it was necessary for one of our clients, age 90 and emphysemic, to enter a nursing home. Visits by the public health nurse and homemaker home health aides had delayed entry into a care facility for two years. Neither the husband nor the wife could have been able to maintain themselves alone. The approximate cost of the nursing and aide visits for the two years was \$5,520. The approximate cost to place both in a nursing home for two years would have been \$43,800." Similar stories could be found throughout Iowa.

For more information about the program in your area contact your county board of supervisors, local homemaker home health aide program or Ronald D. Eckoff, M.D., M.P.H., Chief, Division of Community Health, Iowa State Department of Health, telephone 515-281-4910.

DRUG THERAPY REVIEW

(Continued from page 465)

PVB protocol for testicular cancer is about \$2,000.

CONCLUSION

In conclusion, cis-platinum is a relatively new chemotherapeutic agent which, when used in combination chemotherapy, has been demonstrated to be effective without unacceptable toxicity.¹⁰ It has totally changed the outlook for patients with disseminated testicular cancer, and trials to determine efficacy in other human malignancies are currently under way. — *Richard Helmers, M.D., Resident in Medicine, and Gerald Clamon, M.D., Assistant Professor of Medicine*

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September 1982 Morbidity Report

Disease	Sept. 1982 Total	1982 to Date	1981 to Date	Most Sept. Coses Reported From These Counties
Amebiasis	5	58	17	Story, Polk, Boone
Brucellosis	0	3	1	
Chickenpox	38	5891	7012	Dubuque, Cedar, Davis
Compylobacter	32	239		Wapello, Polk, Linn
Cytomegalovirus	3	36	23	Polk, Floyd
Eaton's Agent infection	24	192	24	Polk, Delaware, Des Moines
Encephalitis, viral	11	32	17	Linn, Pottawottomie, Buchanan
Erythema infectiosum	1	247	1153	Davis
Gastroenteritis (GIV)	464	8462	12850	Linn, Polk, O'Brien
Giardiasis	22	111	87	Johnson, Montgomery, Story
Hepatitis, A	10	64	172	Soc, Woodbury, Corroll
Hepatitis, B	5	71	66	Appanoose, Benton, Polk
Hepatitis, Non A-B	2	12		Dubuque, Scott
Hepatitis type unspecified	1	23	46	Scott
Herpes Simplex	58	330	188	Johnson, Linn, Polk
Herpes Zoster	0	10	4	
Histoplasmosis	0	14	9	
Infectious mononucleosis	12	139	211	O'Brien, Johnson, Benton
Influenza, lab confirmed	0	74	191	
Influenza-like illness (URI)	2265	29750	49826	Polo Alto, Johnson, Linn
Legionellosis	2	20		Block Hawk, Johnson
Malaria	0	6		

Disease	Sept. 1982 Total	1982 to Date	1981 to Date	Most Sept. Coses Reported From These Counties
Meningitis				
aseptic	18	55	51	Linn, Polk, Dubuque
bacterial	9	123	91	Allamakee, Boone, Butler
meningococcal	4	9	19	Linn, Scott, Crawford
Mumps	1	31	46	Humboldt
Pertussis	1	6	4	Fremont
Robies in animals	29	317	697	Story, Polk, Clayton
Rube Syndrome	0	5		
Rheumatic fever	0	3	7	
Rocky Mt. Spotted Fever	0	0	4	
Rubella (German measles)	0	0	4	
Measles	0	0	1	
Salmonellosis	30	231	190	Polk, Linn, Block Hawk
Shigellosis	11	51	25	Pottawottomie, Polk, O'Brien
Toxic Shock Syndrome	1	15		Muscatine
Tuberculosis				
total ill	2	56	71	Linn, Muscatine
bact. pos.	2	41	45	Linn, Muscatine
Typhoid Fever	0	1		
Venereal diseases:				
Gonorrhea	382	3453	3824	Polk, Block Hawk, Scott
Syphilis	3	24	16	Scott, Harrison
<i>Laboratory Virus Diagnosis Without Specified Clinical Syndrome:</i> Adenovirus — 2, Linn; Guillain-Barré Synd. — 1, Polk; Hookworm — 1, Colhoun, 2, Muscatine, 2, Scott, 1, Story; Ascariasis — 1, Johnson; Leptospirosis — 1, Warren; Tularemia — 1, Warren; ECHO — 1, Dollos, 1, Dubuque, 1, Scott; Trichurias Trichurio — 1, Colhoun, 1, Foyette, 2, Scott, 4, Story; Coxsackie Virus — 1, Clinton, 1, Dubuque, 4, Polk, 1, Warren; Clonorchis — 1, Muscatine, 1, Scott, 2, Story.				

ABOUT IOWA PHYSICIANS

At the second International Toxicology Congress in Aspen, Colorado, **Dr. Mark E. Thoman**, Des Moines, was elected president of the American Academy of Clinical Toxicology. Dr. Thoman will serve a two-year term. . . . A recent article in the *ARMSTRONG JOURNAL* noted **Dr. Claire V. Lindholm's** 30 years in medical practice in that community. Dr. Lindholm received the M.D. degree at the U. of I. College of Medicine and began his medical practice in Armstrong in 1952. He is a 25-year member of the American Academy of Family Physicians and past president of the medical staff at Holy Family Hospital in Estherville. An avid supporter of school activities, he was presented a

Team Doctor Award by the Iowa High School Athletic Association at the 1982 Boys State Basketball Tournament. . . . **Dr. Michael Berstler**, Waverly, was elected president of the Bremer County Medical Society. Other officers include **Dr. William E. Hall**, vice president; and **Dr. David B. MacMillan**, secretary-treasurer.

Dr. Gregory L. Hoekstra, Tama, has been named chairman of the Professional Services Division of the South Tama United Way Campaign for 1982. . . . **Dr. D. L. Borgen**, longtime Gowrie physician, recently was honored by the Gowrie community for his 50 years in medical practice. Dr. Borgen received the M.D. degree at the U. of I. College of Medicine and took his postgraduate work in Minneapolis, Minnesota, and Toledo, Ohio. He located in Gowrie in 1932. . . . **Dr. Jeanne Montgomery Smith**, associate professor of internal medicine at the U. of I. College of Medicine, is one of four women named in 1982 to the Iowa Women's Hall of Fame. Dr. Smith was presented with a citation of the honor by Governor Robert D. Ray following her selection by the Iowa Commission on the Status of Women.



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A faculty member at the U. of I. since 1955 and the first woman physician to join the Department of Internal Medicine, Dr. Smith has earned international recognition in the epidemiology of asthma. With her husband, **Dr. Ian M. Smith**, she helped begin a new medical school at East Tennessee University in Johnson City, Tennessee, in 1976. . . . **Dr. Rudolph P. Galask**, professor of obstetrics and gynecology and microbiology at the U. of I. College of Medicine, has been named president of the Infectious Disease Society for Obstetrics and Gynecology. Dr. Galask is one of the founders of the international society formed in 1972.

DEATHS

Dr. Frank S. Peckosh, 77, longtime Lost Nation physician, died August 23 at Crestridge Nursing Home in Maquoketa. Dr. Peckosh received the M.D. degree at the U. of I. College of

Medicine and began his medical practice in Lost Nation in 1930, retiring in 1973.

Dr. Donald C. Konzett, 83, longtime Dubuque physician, died September 4 at Finley Hospital in Dubuque. Dr. Konzett received the M.D. degree at Northwestern University Medical School. Dr. Konzett was president of the Iowa Medial Society in 1952. He was a former president of the Conference of State Presidents of the American Medical Association; former member, Iowa State Board of Health; fellow, American College of Surgeons; and former member of its board of governors; fellow, International College of Surgeons and American Association of Industrial Physicians and Surgeons. He was a member of the board of directors of the Interstate Postgraduate Medical Assembly; member of the Clinical Orthopedic Society; American Association for the Surgery of Trauma; Iowa Clinical Surgical Society and Iowa Orthopedic Society. In 1966, Dr. Konzett received the Merit Award of the Iowa Medical Society in recognition of his outstanding contributions to organized medicine.

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Iowa Cost Study Report

A TOPIC OF INTEREST in Iowa health care delivery is touched on each month in this space. Some subjects are more important than others, obviously.

This month's subject ranks high on the importance scale. What follows is a necessarily cursory look at the final report of the Governor's Commission on Health Care Costs. The report was distributed in October as a 51-page booklet. It deserves elaboration beyond that possible within this one-page boundary.

The Commission offers principles, recommendations, corollaries, etc., covering main sectors of the Iowa health care industry. They go a bit beyond light reading. While comprehensible to most attuned providers and informed followers of health care, the report is spiced with various thought-wrenching phrases, e.g., *horizontally and vertically integrated organizations . . . service stratification . . . hospital-specific price/charge* and the like. To its credit, there is a short glossary.

To back up, for those only passingly familiar, the Governor's Commission came together as an 11-member unit in April, 1981. The one physician member was William Bliss, M.D., Ames surgeon and IMS past-president. Over the ensuing 16 months, the body divided itself and augmented itself. It functioned in work groups and task forces to review "aspects of competition, regulation, hospital and physician payment, utilization review, long term care, mental health, substance abuse, primary care, and data needs, as they are related to the organization, financing and delivery of health care."

The Commission carried from its starting blocks the widely accepted premise that Iowa is the victim of a serious countryside health care cost problem. However, current accessibility of Iowans to quality care was seemingly accepted as a given. The Commission report concentrates most heavily on measures that will constrict costs. As for quality, the report says, "The Commission feels strongly that the rate of use of hospitals can be reduced significantly with associated costs *without risk* to the

population." How far the realignment of health care services, and the adjunctive payment methodologies, can go in the interest of economy is, as we used to say, the \$64 question.

The Commission heralds the persisting health care debate between proponents of a stringently regulatory environment and one where competition is left as the key incentive to contain cost increases. The complexity of the issue is acknowledged. The need is cited for access to precise data or information to help foster positive market forces. But, in sum, the Commission takes a statesmanlike posture, saying we should have a proper mix of regulation and market forces.

The executive summary of the Commission report dwells on urgency and sets out 8 recommendations to be accomplished in one year. These include revising the Iowa certificate of need law; altering the Blue Cross reimbursement formula; developing a Blue Shield mechanism to limit changes in customary charges; forming a consortium to conduct a relative value study; expanding the list of ambulatory care surgical procedures; developing individual provider profiles for use in the utilization review system; establishing a statewide hospital pricing data clearinghouse; and implementing use of the uniform hospital billing form (UB-82). Other necessary near-future goals include experimental hospital and physician payment programs; an experimental payment program for the full range of long term care service; and development of a health promotion organization.

Obviously, these few descriptive words give only a clue to what is intended. Study of the full report helps, but even then further elaboration is needed.

The leadership of the state's medical profession, as represented by the Iowa Medical Society Board of Trustees, has already spent parts of several days evaluating the Commission recommendations. Various legal ramifications and corollative policy positions have been identified. The interest of the IMS will remain keen as the Commission bounces the ball into the court of the new Health Policy Corporation of Iowa. The HPCI is assigned to monitor implementation of the Commission recommendations.

November 1982

Journal of the Iowa Medical Society



PRESIDENT'S PRIVILEGE

A REVIEW OF REVIEW

WE ARE WELL into the modern peer/utilization review era. This is irrefutable. For some physicians it has become an imposing and complex environment. Why is this so?

After all, physicians must try to make each chapter in medical history better than the previous one. We have a duty to see that quality, quantity and economics join the medical main-road at the right points. Acknowledging this, most physicians will say they get only limited satisfaction from personal participation in review activity, but, when asked, most of us agree it is important for the profession to be so engaged. Again, then, why are we apprehensive?

We all agree that peer review is essential, but inconsistency, outside control, rationalization for breaking the code of strict confidentiality of medical information all appear to contribute to the confusion.

Fundamentally, the inpatient UR process has its base with the hospital medical staff. The functions performed here have a voluntary/mandatory blend. Some are performed at the direction of state and federal review agencies; some are at the behest of third party payors and corporate entities acting in response to economic pressures; historically, most have been directed voluntarily by physicians under a commitment made by the profession to quali-

ty care in appropriate amount for a fair return. This commitment is affirmed by the IMS House of Delegates.

Today's review circumstances are made additionally complex by changing, but as yet not fully resolved, legal and regulatory requirements for quality assurance. Then there are the antitrust ramifications associated with fee review.

Medical peer review has to be a local physician function. But, too, it is an activity which can lend itself to differing approaches among distinct medical communities. This said, we must then deal with the need for conformance, comparison and evaluation.

The entire subject needs our most thoughtful contemplation. We need continually, but now particularly, within our state and county medical societies to assess our role in peer review. By so doing, we will discharge our responsibility to patients individually, to the public generally, and to the profession as well.

For a good review of today's peer review milieu IMS members are directed to the 1982 report of the AMA Council on Medical Service. It sets forth nine principles for voluntary peer review; for example, one declares: *Physicians involved in peer review should be representatives of the medical community; participation must be structured to maximize the involvement of the medical community. Any peer review process must provide for consideration of the views of individual physicians, groups of physicians or institutions under review.*

Hormoz Rassekh, M.D.
President

THINGS YOU SHOULD KNOW

GOOD WISHES OF THE SEASON

the holiday season and the year ahead.

The officers and administrative staff of the Iowa Medical Society extend good wishes for

82/83 IOWA PHYSICIAN CONCERN

This IMS program was initiated November 16 with a mailing to member physicians and a public announcement the following day. The program's basic purpose is to request Society members to redeclare their willingness to aid patients experiencing economic hardship because of unemployment or other loss of income. The 11/16 mailing included a letter from President Rassek, a folder and poster for patient reading, and guidelines a county medical society might follow in establishing a temporary local program to see that medical care is furnished where a financial need is identified and government support is unavailable.

GENERAL ASSEMBLY OPENS

New Republican Governor Terry Branstad will join Iowans in viewing the opening of the Democrat controlled General Assembly January 10. The Iowa Senate will have a 28 to 22 Democrat majority; the House will have a 60 to 40 Democrat plurality. This changed configuration will present challenges for the lawmakers and for most specific groups, including medicine.

IMS/AETNA COVERAGE BOOST

Beginning 2/1/83, premiums paid for coverage under the IMS/Aetna Liability Insurance Program will increase by 20%. The six-year program has seen two years of rate decreases, one year of no change, and three years of rate increases. The 1982 annual report of the program was presented to the IMS Medico-Legal Committee October 27 and accepted by that body. The report shows a significant increase in both number and severity of claims. New in 1983 will be the availability of prior acts coverage to assist interested physicians with claims made coverage in converting to the IMS/Aetna program. Also, the Aetna has added an additional year to the guarantee of coverage taking it to 1986. The new Interest Income Sharing Plan, initiated in 1982, had accumulated \$129,003 through its first two quarters. This money will be paid to insureds if the claim experience permits.

USE OF WENNBERG DATA

Activity is being undertaken cooperatively by the IMS and Iowa Hospital Association to encourage and help Iowa hospitals understand and use for educational purposes data from the recent Wennberg utilization study conducted recently under the auspices of the Iowa Voluntary Cost Containment Committee.

LEGISLATIVE COST COMMITTEE

At its final meeting 11/16, the Health Care Cost Joint Subcommittee of the Iowa General Assembly okayed 4 draft bills to go to standing committees in January. These proposals would (a) create a health data commission, (b) provide for a subscriber majority on health service corporation boards, (c) remove barriers to hospital employment of physicians in charge of x-ray or lab facilities, and (d) allow Blue Cross to contract with ambulatory surgical facilities.

1983 IMS HEALTH PROGRAM RATES

1983 rates for the Statewide Physicians Health Program will go up 34.9%. Depending on the option in effect, monthly rates for family coverage will range from \$100.78 to \$213.62; the rates for single coverage will range from \$56.95 to \$80.66. The 1983 increases may cause some insureds to consider moving from a higher to a lower level option (thus lowering premiums while increasing deductibles). This transfer activity will be possible during the 90-day open enrollment period starting January 1. Program improvements include provision for two options within an office or clinic; also a second dental option.

INPATIENT SUBSTANCE ABUSE

The Health Policy Corporation of Iowa has reaffirmed a policy opposed to adding any acute care beds in the state. This reaffirmation is prompted by expressed interest in additions to inpatient substance abuse bed capacity. Similarly, HPCI has reiterated support for this treatment being provided in the most cost effective setting.



QUESTIONS - ANSWERS

KEN STULTS, P.A.
Iowa City, Iowa

EMERGENCY CARE FOR CORONARY PATIENTS

These comments about pre-hospital emergency coronary care in Iowa are furnished by the director of the Emergency Medical Services Learning Center at University of Iowa Hospitals and Clinics.

How do you compare Iowa with other states in providing pre-hospital emergency coronary care?

Many states began developing pre-hospital emergency care systems several years before Iowa. However, especially where cardiac care is concerned, these efforts have been directed almost exclusively at developing paramedic level services in larger urban centers. In Iowa, while we are currently making significant headway in the development of paramedic services in our cities, we are also concerned with developing effective advanced care systems in our rural areas. If we are successful in our current efforts, Iowa could become a national model for rural emergency cardiac care.

Twenty-three rural Iowa communities are now participating in an experimental emergency heart attack care program. What should Iowa physicians know about this program?

The purpose of this study is to evaluate a method of delivering effective pre-hospital

care to cardiac arrest victims in small and medium-sized communities. Until now the only approach available was to establish EMT-II or EMT-Paramedic level services. This level of provider, however, requires hundreds of hours of training, usually away from the community. Not only are such services very expensive, especially for volunteer crews, but they involve a wide range of complex skills which are difficult to learn and even more difficult to maintain when used only infrequently.

The method we are currently looking at, EMT-Defibrillation, involves a single skill which can be learned in a two-day training session conducted in the local community. Skill proficiency can be maintained through monthly practice on simulated cardiac arrests using electronic training equipment designed for this purpose. The question to be answered, of course, is whether defibrillation, when isolated from all other components of advanced care, can significantly improve survival from out-of-hospital cardiac arrests. We are not only attempting to answer this question, but in the process, trying to determine the most effective methods of both initial skill training and ongoing skill maintenance.

Under the study, EMTs in 18 of the participating towns are trained to perform cardiac defibrillation prior to transportation. What do you expect or hope the 1983 study results to show?

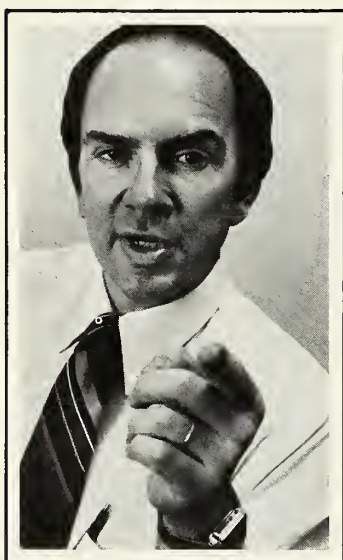
In a year-long survey of basic level ambulance services conducted by the EMSLRC between July, 1979 and June, 1980, it was determined that no more than 3% of cardiac arrest victims are currently surviving to leave the hospital in rural Iowa. Any improvement in this dismal statistic would make our efforts worthwhile. We felt when we started it might be possible to improve survival to as high as 15% overall. I am hopeful the final results will show not only that this can be achieved, but that it can be achieved in a manner that is both cost-effective and safe.

Tell us briefly about the Seattle program.

Seattle, of course, is a large city. It is a part of even larger King County. It involves a densely

(Please turn to page 493)

“How am I supposed to control health care costs if you can’t?”



■ The answer is simple. You can't. At least, not alone. Neither can we. Alone.

The answer lies in *cooperative* involvement.

That's why we've helped establish — or in many cases helped fund — several groups whose objectives are to improve Iowa's health care delivery system, and find ways to provide quality health care at an affordable cost.

These groups include the Governor's Commission on Health Care, Iowa Business Labor Coalition, Iowa Voluntary Cost Containment Committee, Health Policy Corporation of Iowa, and others.

We continue to pursue cost containment efforts with the Iowa Medical Society, the Iowa Hospital Association, and other groups.

You can help, too. By using Iowa's health care system as wisely as possible.

That means utilizing outpatient services whenever medically appropriate.

It means getting involved in local community health planning efforts.

And it means taking better care of yourself.

Working together, we *can* have an impact on the cost of health care in Iowa.

But it won't happen overnight. And it won't be easy. Because changing habits never is.

To learn what more we're doing to control costs — and what more you can do — talk to Blue Cross and Blue Shield of Iowa soon.



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Solitary Benign Rectal Ulcer In Elderly Women

HUBERT J. VAN PEENEN, M.D.,
LINDA K. BICKERSTAFF, M.D., and
JOSEPH P. CALLAGHAN, M.D.
Decorah, Iowa

This paper presents seven cases of benign solitary ulcer of the rectum or rectosigmoid discovered over a five year period in a small rural community hospital. None of them meet the criteria of the specific entity. All of the patients were middle-aged or elderly women with minimal or no rectal bleeding. In two of them the ulcer was clearly related to cardiovascular medication and in three others there was a common history of ingestion of hydrochlorothiazide. None of them had a prolonged course or serious complication.

SOLITARY BENIGN ULCER of the rectum or rectosigmoid is a fairly common cause of rectal bleeding and is often found incidentally during proctosigmoidoscopic examination.

The causes are diverse although most recent literature discusses only the syndrome described by Haskell and Rovner¹ and fully characterized in a large English series by Madigan and Morson.²

This paper presents 7 cases of benign solitary ulcer discovered at Winneshiek County

The authors are in the private practice of medicine in Decorah and are on the staff of the Winneshiek County Memorial Hospital.

Memorial Hospital (WCMH) in the past 5 years. None of the 7 fit into the syndrome of Madigan and Morson.

All of the patients are elderly women rather than young adults of both sexes. The characteristic histological pattern is not present. The course of the illness has been benign and usually short-lived rather than of many years' duration.

Some of the cases are clearly related to medication while others may belong to a new entity.

CASE REPORTS

Seven cases of solitary benign ulceration or pre-ulceration of the rectum or rectosigmoid were biopsied at WCMH from 1976 to 1981. All patients were white women and resided in the local trade area of approximately 25,000 people. None had a history of frequent enema usage or of laxative abuse and none had overt rectal prolapse. Only one had hemorrhoids.

Case 1 — Age 69

Medications — naproxen, methylDOPA, hydrochlorothiazide, propranolol, quinidine

Concomitant Illnesses — hypertension, duodenal peptic ulcer, atrial tachycardia

Presenting Symptoms — liquid diarrhea without detectable bleeding, leg cramps, listlessness

Proctosigmoidoscopy — single anterior rectal ulcer, distance not specified

Histology — sharply delimited necrotic ulcer

THE IOWA MEDICAL FOUNDATION HAS DESIGNATED THIS ARTICLE AS THE HENRY ALBERT
SCIENTIFIC PRESENTATION FOR THE MONTH OF DECEMBER 1982

of mucosa with neutrophilic infiltrate in adjacent viable mucosa

Barium Enema — within normal limits

Course — quinidine discontinued, prompt improvement

Case 2 — Age 73

Medications — digoxin

Concomitant Illness — congestive heart failure presently well controlled

Presenting Symptoms — intermittent cramps and diarrhea for four months with small amounts of rectal bleeding

Pertinent Laboratory Findings — serum sodium 126 mEq/Li, potassium 2.6 mEq/Li

Proctosigmoidoscopy — anterior sharply-localized area of hemorrhage, distance not specified

Histology — organizing intramucosal hemorrhage with siderophages, edema and a light inflammatory infiltrate of eosinophils and plasma cells with early ulceration

Barium Enema — diverticulosis

Course — digoxin dose reduced, electrolyte problem corrected, all symptoms disappeared, no recurrence

Case 3 — Age 46

Medications — none

Concomitant Illness — multiple psychophysiologic complaints

Presenting Symptom — rectal bleeding

Proctosigmoidoscopy — anterior focal hyperemia at 16 centimeters

Histology — superficial edema and focal necrosis of mucosa with heavy infiltrate of eosinophils and plasma cells

Barium Enema — within normal limits

Course — bleeding disappeared within 6 weeks and has not recurred.

Case 4 — Age 80

Medications — chlorthalidone

Concomitant Illness — mild hypertension, acute depressive episode

Presenting Symptom — acute depression, no intestinal symptoms or rectal bleeding

Proctosigmoidoscopy — 0.5 centimeter plaque on anterior rectal wall, distance not specified

Histology — superficial mucosal ulceration, hyperemia and infiltration with neutrophils

Barium Enema — diverticulosis

Course — improvement of depression, no intestinal symptoms developed

Case 5 — Age 83

Medications — hydrochlorothiazide, papaverine

Concomitant Illness — mild hypertension

Presenting Symptoms — 30 pound weight loss over 4 months, alternating constipation and diarrhea, no rectal bleeding

Proctosigmoidoscopy — circumferential hemorrhagic ulcer 1-2 centimeters in width, distance not specified

Barium Enema — diverticulosis

Course — steady improvement with stabilization of weight

Case 6 — Age 87

Medications — hydrochlorothiazide, digoxin

Concomitant Illnesses — resection of "intestinal hemangioma" 2 years previously, congestive heart failure, well-controlled

Presenting Symptoms — "colitis" of many years duration with intermittent mild rectal bleeding

Proctosigmoidoscopy — sharply limited anterior ulcer at 12 centimeters

Histology — necrotic ulcer of entire thickness of mucosa, hyperemia, edema and neutrophilic infiltrate of adjacent tissue

Barium Enema — within normal limits

Course — continues mild bleeding

Case 7 — Age 79

Medications — hydrochlorothiazide, phenobarbital and belladonna

Concomitant Illnesses — mild hypertension, hemorrhoids

Presenting Symptoms — small amount of gross blood in stools for 3-4 months

Proctosigmoidoscopy — "granular colitis" circumferentially at 18-22 centimeters

Histology — surface ulceration, heavy infiltrate of plasma cells, eosinophils and neutrophils

Barium Enema — within normal limits

Course — continues mild bleeding

None of these patients had the distinctive histologic picture of periglandular fibroblastic proliferation described by Madigan and Morson or by Gad,³ nor did they have colitis cystica profunda.⁴

DISCUSSION

Two kinds of benign solitary ulceration of the rectum have been described in recent literature, the syndrome of Madigan and Morson

and colitis cystica profunda which is probably very closely related to it. We were unable to find any patients who had either condition.

The syndrome of Madigan and Morson seems to be related to dysfunction and incoordination of the internal sphincter and pubococcygeus muscles, to occur most frequently in young adults and to have a very chronic course. The ulcers are localized to the anterior rectal wall between 4 and 12 centimeters from the anal verge and are often on a valve of Houston. More than one ulcer may be present within a circumscribed area and some ulcers are circumferential. An early "pre-ulcerative" plaque may occur in the same location.

The presenting symptom is always rectal bleeding, the severity of which seems to correlate with the extent and depth of the ulcer. The patients have a high incidence of hemorrhoids and of rectal prolapse.

Local treatment is ineffective and sometimes harmful. A few patients suffer severe complications such as exsanguinating hemorrhage or stricture and, on occasion, operative procedures for rectal prolapse have been recommended for cure.⁵

A characteristic histological lesion, fibrosis and smooth muscle cells radiating from the muscularis mucosae to surround mucosal glands, is seen both in these patients and in many others with non-ulcerating prolapse. Some authors feel its presence is necessary for diagnosis.^{2, 3}

Other causes of benign solitary rectal ulcer have been overlooked in the medical literature since the description of this syndrome. Yet, in community hospital practice they seem to be much more important as this series shows.

Cases 1 and 2 were clearly drug related, the former to quinidine and the latter to digoxin. Cases 3 and 4 are preulcerative states of unknown etiology. It is difficult to relate them to cases 5, 6, and 7 which have a number of traits in common and may represent a specific entity of their own. All were older than any case of Madigan and Morson, all were female, all were taking hydrochlorothiazide, and all have had minimal symptoms. Their lesions were in the rectosigmoid rather than in the area of the valve of Houston and there was no suggestion of rectal prolapse, either overt or occult. Unfortunately, since so many patients in this age group take hydrochlorothiazide, it is not possi-

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ble to prove or even suggest a causal relationship of drug to ulceration.

It is important to differentiate cases like these from those usually grouped under the name "benign solitary ulcer of the rectum" since their prognosis for duration and severity of disease is so much better.

CONCLUSION

Seven cases of benign solitary rectal ulcer are described. All were elderly women with minimal or no rectal bleeding. In two of them the condition was clearly related to medication. In three others it may have been. No case resembled those recently published under the diagnostic term "benign solitary ulcer of the rectum."

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The Metacarpal Index In Spontaneous Pneumothorax

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ALTHOUGH PNEUMOTHORAX may result from trauma, tuberculosis, bullous emphysema, or long-term ventilator therapy, most spontaneous pneumothoraces occur in young patients who have no evidence of underlying pulmonary pathology.^{1, 2, 3, 4} The tendency for spontaneous pneumothorax to recur in many such patients suggests the presence of an underlying structural abnormality in the lung or perhaps a generalized connective tissue disorder.¹ Genetic studies of patients with familial spontaneous pneumothorax suggest that some patients may have an inherited defect increasing the tendency for occurrence of spontaneous pneumothorax.⁵

We have observed that young patients with spontaneous pneumothorax tend to be tall and to have an asthenic habitus, a finding which has been documented by others.⁶ This raises the possibility that some patients with spon-

The measurement of the metacarpal index in a group of young patients with spontaneous pneumothorax is reported. High metacarpal index has previously been shown to be characteristic of Marfan's syndrome. Six of 12 patients had abnormally high metacarpal indices (greater than 8.0). Complete evaluation failed to detect further evidence of Marfan's syndrome in any of these patients. An underlying connective tissue disorder in patients with spontaneous pneumothorax is suggested but not proven.

taneous pneumothorax may have Marfan's syndrome. Sinclair described a radiologic sign called the metacarpal index with which he could show a clear separation between a group of patients with Marfan's syndrome and a group of normals.⁷ The usefulness of this sign has been documented by others although some overlap of Marfan's with normals has been shown.⁸ Pyeritz and McKusick suggest that patients with typical abnormalities in 2 of 4 areas (family history, skeletal, ophthalmologic, and cardiac) can be considered to have Marfan's.⁹ This study was undertaken to evaluate the metacarpal index in patients with spontaneous pneumothorax and to determine if they had any other evidence of Marfan's syndrome.

METHODS

Patients were eligible for this study if they were less than 40 years of age when they presented with spontaneous pneumothorax and if they had no radiographic or clinical evidence of other pulmonary pathology. Four patients

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admitted to our hospital between January 1 and July 1, 1980 were studied, and 8 patients who were admitted between January 1, 1975 and December 31, 1979 agreed to return for evaluation. Informed consent was obtained from each patient.

A history was obtained from each patient with emphasis on pulmonary symptoms and family history.

Each patient underwent physical examination with measurement of height, arm span, upper segment (vertex to pubis), and lower segment (pubis to heel).

A single PA radiograph of the dominant hand was made, and the metacarpal index was calculated as the average of the axial length divided by the width at the midpoint of the second through fifth metacarpals.

Each patient had a complete ophthalmologic examination, including a search for ectopia lentis and anterior chamber angle abnormalities.

M-mode echocardiography was performed utilizing a Smith-Kline Ekoline 20A system with a 2.25 MHz focused transducer. Patients were also studied by 2-D echocardiography using a Toshiba SSSh-10A Sonolayergraph. Aortic root dimension was measured, and examination for mitral valve prolapse was carried out by standard techniques.

RESULTS

Nine of the 12 patients gave a history of cigarette smoking, but only 3 admitted chronic cough. None had other pulmonary symptoms. Three patients had had recurrent spontaneous pneumothoraces, and one had undergone thoracotomy and pleurodesis.

One patient (J.B.) had a brother who also had a spontaneous pneumothorax, but no other patient gave a family history of spontaneous pneumothorax. There was no family history in any patient which was compatible with Marfan's syndrome.

The results of skeletal measurements are shown in Table 1. Six of the 12 patients had metacarpal indices above 8.0, the upper limit of normal in Sinclair's study. Arm span exceeded body height in 7 patients, but only 2 of these were patients with metacarpal indices above 8.0. The upper segment to lower segment ratio was less than 1.0 in 7 patients; 4 of these patients had metacarpal indices greater

TABLE 1
SKELETAL MEASUREMENTS IN SPONTANEOUS
PNEUMOTHORAX PATIENTS

Patient	Sex	M.I.*	Span (cm)	Height (cm)	Upper Segment/ Lower Segment
T.O.	F	8.8	160	161.5	0.89
M.D.	M	8.7	184	187	1.08
J.G.	M	8.4	188	177.5	0.99
J.B.	M	8.4	188	182	0.96
J.W.	M	8.4	170	161	0.89
D.C.	M	8.2	177	185	1.18
J. We.	M	7.6	198	187	0.78
M.R.	F	7.6	164	165	0.99
G.L.	M	7.6	203	198	1.13
M.M.	M	7.4	163	162	1.53
W.G.	M	7.4	180.5	180.5	0.95
D.M.	M	7.3	182.5	179	1.0

* Metacarpal index.

TABLE 2
RESULTS OF ECHOCARDIOGRAPHY IN SPONTANEOUS
PNEUMOTHORAX PATIENTS

Patient	M.I.*	Aortic Root (cm)†	Mitral Prolapse
T.O.	8.8	2.7	Na
M.D.	8.7	3.4	No
J.G.	8.4	3.5	No
J.B.	8.4	2.5	No
J.W.	8.4	3.2	No
D.C.	8.2	3.0	Na
J. We.	7.6	2.9	Na
M.R.	7.6	2.6	No
G.L.	7.6	3.2	Na
M.M.	7.4	3.5	Yes
W.G.	7.4	2.9	Na
D.M.	7.3	3.4	No

* Metacarpal index.

† Normal aortic root = 2.0-3.7 cm.

than 8.0. Three patients (J.G., J.B., and J.W.) had abnormalities of all 3 parameters.

No patient had abnormalities on ophthalmologic examination indicative of Marfan's syndrome.

Results of echocardiography are shown in Table 2. No patient had aortic root dilatation. Only one patient had evidence of mitral valve prolapse; his metacarpal index was 7.4.

DISCUSSION

Pulmonary abnormalities associated with Marfan's syndrome include chest wall deformities, congenital absence of one or more

lobes, bronchiectasis, apical bullous emphysema, and honeycomb lung.^{7, 10, 11} Spontaneous pneumothorax in the absence of other radiographic abnormalities has been occasionally reported, but this has not been emphasized and has not been found as a mode of initial presentation of Marfan's syndrome.¹¹

Patients with Marfan's syndrome have a markedly reduced life expectancy.¹² Thus it is important to identify such patients for genetic counseling, prompt treatment of complications, and prophylaxis against cardiovascular complications.¹² Payvandi, *et al*, have shown a high incidence of cardiac, skeletal and ophthalmologic abnormalities detectable by careful examination of first degree relatives of patients with Marfan's syndrome.¹³ As the tendency of spontaneous pneumothorax patients to have tall stature had been previously documented, we believe it possible some of these patients might also have Marfan's syndrome detectable by careful screening.⁶

Sinclair measured the metacarpal index in 20 patients with Marfan's syndrome and in 100 normal patients; he found that all the normals had indices less than 7.9 and all the Marfan's patients had indices greater than 8.4.⁷ Parish showed the upper limit of normal (mean + 2 standard deviations) in males (8.0 left, 7.7 right) and females (8.7 left, 8.6 right).¹⁴ Eldridge showed a good separation between Marfan's syndrome and other tall individuals using the metacarpal index although one patient with Klinefelter's syndrome had an abnormally high index.⁸ Eldridge's absolute values for metacarpal index were higher than in other studies due to differences in technique of measuring the bones.⁸

Six of our 12 patients had metacarpal indices above the normal established by Sinclair's study. Other indices of skeletal proportions, such as arm span to height ratio and upper segment to lower segment ratio, have been shown to have considerable overlap between Marfan's patients and normal.^{7, 8} We found abnormalities in these measurements both in

patients with normal metacarpal indices and in patients with abnormal metacarpal indices. Only 3 patients (J.B., J.G., and J.W.) had abnormalities of all 3 indices of skeletal proportions and none of these had other evidence of Marfan's syndrome. Patient J.B. has a brother who has had a spontaneous pneumothorax. The brother has not been studied, but the possibility that this family harbors Marfan's or familial spontaneous pneumothorax is intriguing.

The classic ocular feature of Marfan's syndrome is ectopia lentis. Other characteristic features include anterior chamber angle abnormalities, iris defects, glaucoma, high myopia, and retinal detachment. Each of these abnormalities is readily detected on detailed ophthalmologic examination, but none was present in our patients.

Cardiovascular abnormalities in Marfan's syndrome range from uncomplicated mitral valve prolapse to catastrophic aortic root dissection. The 2 most likely to be detected in asymptomatic patients are uncomplicated mitral valve prolapse and aortic root dilatation, both usually detectable by echocardiography.⁹

SUMMARY

In summary, high metacarpal index has been shown by others to be characteristic of Marfan's syndrome. We found high metacarpal indices in 6 of 12 young patients presenting to the hospital with spontaneous pneumothorax. However, we were unable to find other evidence of Marfan's syndrome in our patients by recording family history and by detailed cardiac and eye examinations. Thus, the existence of an underlying connective tissue disorder in young patients with spontaneous pneumothorax is suggested but not proven.

REFERENCES

The references noted in this paper are available on request either from the authors or the JOURNAL OF THE IOWA MEDICAL SOCIETY.



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COMMENTING EDITORIALLY

MARION E. ALBERTS, M.D.
SCIENTIFIC EDITOR

HAPPINESS AND SUCCESS

"To laugh often and love much; to win the respect of intelligent persons and the affection of children; to earn the honest approbation of critics and endure the betrayal of false friends; to appreciate beauty; to find the best in others; to give of one's self; to leave the world a little better whether by a garden patch, a healthy child, or a redeemed social condition; to have played and laughed with enthusiasm and sung with exultation; to know even one life has breathed a little easier because you have lived. This is success."

— RALPH WALDO EMERSON.

AS ANOTHER YEAR approaches its final days, it is appropriate to take stock of ourselves and our accomplishments made. We approach a season that carries with it a spirit of both happiness and sadness. Yes, there is sadness during the Holiday Season as we miss being with loved ones, or we come to realize anew that some have gone on before us. But, let us direct ourselves here to the presence of life. Let

us be filled with happiness and love for all.

In the past month I have had an experience in my practice to renew my spirit mightily. This went beyond any monetary gain in one's professional life. A smile worth millions was bestowed upon me by a child but four months of age.

Three days before the happy moment I had admitted the infant for treatment of acute purulent meningitis; an infant nearly in coma, febrile, and obviously very ill. Intravenous fluids and antibiotics, excellent nursing care, and an unseen element afforded the infant a rapid recovery. The third morning after admission, as I examined her, she opened her eyes and her face erupted into one of the most radiant smiles I have ever witnessed. The ensuing chuckling added a gilt edge to the smile. Her recovery progressed satisfactorily; each morning brought more smiles.

The Holiday Season is a time for smiles and love; music and lights; gifts and remembrances. All this in honor of a Baby. It is summed up beautifully in a hand-printed copy of Emerson's ode to success given to me by a friend. I sincerely hope that my path through life will be a fulfillment of the ode. My critics may judge, but their judgment is subject to Higher Concurrence. Each of us must desire to be worthy of those who call on us for our professional services. May we all give attention to the criteria of success as measured by our appreciation for the feelings of others, a love of the beauty of nature, and the giving of one's self in such a manner that others may find happiness, good health, and a love for each other. Smiles are contagious; frowns are on the faces of those who may remain lonely and unhappy. Let us do all we can to help those we serve to fend off loneliness and unhappiness.

Cheers to all during the Holidays. We express greetings of good will and happiness to all our readers. May the end of this year usher in a most Happy New Year for all. — M.E.A.

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The new AMA Patient Medication Information Program is called one of the most valuable ever launched by the Association. PMI sheets are now available for 20 of the most commonly

prescribed drugs. They are 5½" x 8½", printed front and back, and come 100 per pad.

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QUESTIONS/ANSWERS

(Continued from page 483)

populated urban/suburban community. Most areas of King County, and all of Seattle proper, are now served by fully trained professional paramedic services. During the transition period from basic to advanced care in 1978-79, however, the basic level EMT-As in a particular suburb of 100,000 population were trained to the EMT-Defibrillation (EMT-D) level and their effectiveness was evaluated for one year. With the capability to defibrillate being the only difference, 19% of the cardiac arrest victims survived to leave the hospital during the EMT-D period, while only 4% had survived during the EMT-A period. While their success is encouraging, it must be recognized that many differences exist between establishing such a program in a heavily populated suburban com-

munity and in a small Iowa community served by volunteer ambulance technicians.

Are you optimistic about Iowa having widespread defibrillator skills within a reasonable period of time?

I am optimistic that, should we demonstrate that EMT-Defibrillation is an effective and practical approach to emergency cardiac care in a rural state, the appropriate state agencies (Department of Health, Board of Medical Examiners) will move expeditiously to make the required changes in the current Advanced Care Rules and Regulations. These agencies are very much involved with our activities and have clearly demonstrated their desire that the project be conducted as safely and efficiently as possible. If everything continues to go well I am confident that within a year we will see large numbers of rural ambulance services being trained to the EMT-D level. Already we have received well over 100 written inquiries from ambulance services about training if and when it becomes generally available.

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OUR MAN ON EDUCATION

RICHARD M. CAPLAN, M.D.

NATURE'S UNITY

TODAY IT WAS my pleasure to return to the gross anatomy laboratory and wander there as the entire freshman class continued its dissection of cadavers. It was a circumstance of high nostalgia. And although this laboratory resides in a nice new building, the formalin fragrance persisted as in ancient days. It's amazing what memories can be triggered by a smell. I also remembered the day I cut my own left index finger during dissection and had to go to student health for suturing. My blood was red. My cadaver bled not.

True, students today still complain greatly about how much there is to learn in an anatomy course and how they suffer under the pressure of it. But it's hard to think there is not also great excitement to be felt from the profoundly emotional experience of thoroughly dissecting a fellow human being. This passage from Richard Selzer's new book, *Letters to a Young Doctor*, seems particularly apt. He tells the young surgeon: "As the sculptor must gain unlimited control over his marble, the surgeon must 'own' the flesh. As drawing is to the painter, so is anatomy to the surgeon. You must continue to dissect for the rest of your life. To raise a flap of skin, to trace out a nerve to its place of confluence, to carry a tendon to its bony insertion, these are things of grace and beauty."

I attended that lab not only to indulge my occasional yearning for nostalgic trips, but to

serve as a dermatologic "consultant" in case any of the students found skin lesions on their cadavers and wanted to ask questions. A discussion with some students about the commonplace seborrheic keratoses provided opportunity to digress a bit on wound healing and to marvel at how epidermis is restored after it is traumatically removed.

That particular conversation had hardly ended when I went outdoors to walk back to my office. Just outside the building I encountered an immense wound of a previously lovely, wooded ravine. The grass was gone. Black earth and brown clay were everywhere. Bulldozers, like giant insects, crawled over this freshly dug earth and nuzzled it about. Huge new pipes for draining sewage lay scattered and water spewed from the end of one long pipe. It seemed like much blood gushing from a torn vein, symbolically testifying to the somber wound of the earth that I saw before me. I was placated only slightly by remembering that the University issued an "environmental impact statement" when this construction project was begun, promising to restore the ravine to "original" condition as soon as the necessary work was completed. I can only hope so. But the sight certainly made me remember that the earth, even if not conventionally considered to be a living structure, manages to heal itself magnificently.

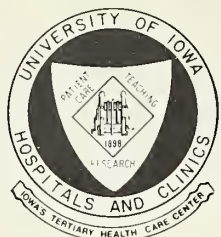
Maybe Earth is geological, but Mother Earth is also biological. She tends wonderfully to her needs for surface homeostasis. Erosion smooths and soothes. Earthworms and vegetation shape, and restore vitality. Gross anatomy, epidermal wound healing and environmental impact statements are all of a piece.

COURSES & CONFERENCES U. OF I. COLLEGE OF MEDICINE

January 5	Ophthalmology Clinical Conference
January 14-16	Pediatric Advanced Cardiac Life Support
January 20	Radiation Therapy Seminar
February 2	Ophthalmology Clinical Conference
February 11-13	Advanced Cardiac Life Support, Broadlawns Medical Center, Des Moines
February 17	Radiation Therapy Seminar

Dr. Caplan is Associate Dean for Continuing Medical Education at The University of Iowa College of Medicine.

DRUG THERAPY REVIEW



UNIVERSITY OF IOWA HOSPITALS AND CLINICS

REYNOLD SPECTOR, M.D., Editor

SLOW-RELEASE THEOPHYLLINE FOR THE TREATMENT OF CHRONIC ASTHMA

EDITOR'S NOTE: Dr. Weinberger and his associates in the following article discuss the use of sustained-release theophylline preparations in patients with chronic asthma. Many patients with chronic asthma benefit clinically from relatively constant plasma levels of theophylline. However, there is no convincing evidence proving the value of constant plasma theophylline levels when theophylline is used in other conditions, e.g., Cheyne-Stokes respirations, heart failure, or chronic obstructive pulmonary disease with a bronchospastic component.

ORAL THEOPHYLLINE is a highly effective medication for the control of chronic asthma when dosage and dosage interval are adjusted to maintain serum concentrations within the approximate therapeutic range of 10 to 20 mcg/ml. Rapidly absorbed preparations such as plain, uncoated tablets and solutions often result in fluctuations of theophylline con-

centration that exceed the therapeutic range unless unrealistically short dosing intervals are used.¹ A formulation with an appropriate slow-release pattern can decrease fluctuations and improve the clinical effect of the drug in many asthmatic patients with dosing intervals up to 12 hours,² but rates and completeness of absorption vary among the 23 products currently marketed.

EVALUATION OF SLOW/RELEASE FORMULATIONS

Theophylline is rapidly and completely absorbed when given in solution or solid dosage forms that undergo rapid dissolution.³ In an evaluation of the rate and completeness of absorption for various slow-release theophylline dosage forms, absorption was complete in only 3 of 6 marketed products, and the rate varied greatly among the various formulations.⁴ A subsequent study by the same investigators examined the consequences of various rates of absorption for 22 brands of slow-release theophylline by determining the predicted fluctuations in serum concentration during 8- and 12-hour dosing intervals when the rate of theophylline elimination is that of an average child or adult.⁵ All preparations for which data were available were associated with predicted fluctuations of less than 100% for an average nonsmoking adult (100% fluctuation occurs when the peak serum concentration is twice the trough), but only the Theo-dur formulations were associated with predicted fluctuations of less than 100% during 12-hour dosing intervals when the rate of theophylline elimination was that of an average child (See Figure 1). More rapid elimination, however, might result in excessive fluctuation during 12-hour dosing even with these formulations. Furthermore, predicted values are minimum estimates since actual fluctuations are generally somewhat greater, primarily because of diurnal variation in the rate of absorption.⁶

COST OF TREATMENT

Cost of treatment varies greatly with the source of the medication. At The University of Iowa Pharmacy, the most commonly prescribed sustained-release theophylline preparation, Theo-dur, when purchased as 300 mg tablets in lots of 100 would cost an adult receiving an average 900 mg/day dose \$82/year. The cost would be somewhat greater if the 200 or

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This information for Iowa physicians is furnished and sponsored by the University of Iowa Hospitals and Clinics.

100 mg dosage size were used. In contrast, the cost would be \$97 for patients taking the same dose of theophylline as 200 mg aminophylline tablets, \$76 for the Slo-phyllin brand of plain, uncoated tablets, and \$90 for Slo-phyllin Gyrocaps at equivalent dosage. At other pharmacies in Iowa City, the cost of the same Theo-dur prescription would range from \$137/year to \$150/year, while the cost of aminophylline tablets would be reduced to \$68 if the least expensive generic brand were used. Equivalent doses of other brands of slow-release theophylline products ranged from \$135 to \$180/year for 5 nationally advertised brands that were available locally and \$102 for a "generic" brand. While absolute cost will vary among pharmacies and with the amount purchased, the average wholesale cost obtained from the January 1982 REDBOOK suggests that these probably are reasonably representative of the range of available prices among 19 brands listed. Costs increase for equivalent doses when a smaller dosage from the same manufacturer is used.

PRODUCT SELECTION

The more rapid the rate of theophylline elimination and the more labile the patient's airways, the greater the benefit from slow-release theophylline. For patients with rates of elimination as slow as the median for nonsmoking adults, all products are associated with fluctuations in serum concentration of less than 100%, and clinically important differences between the various products generally will not be apparent. For adults with even longer than average half-lives of elimination, even plain, uncoated tablets might be associated with acceptable fluctuations at 12-hour dosing intervals. Plain, uncoated tablets in adults with average elimination rates, however, require 8-hour dosing, and these rapidly absorbed preparations are associated with unacceptable fluctuations in many children even when dosed at 6-hour intervals.

The therapeutic advantage of slow-release preparations in general becomes most apparent at more rapid rates of elimination. When the elimination half-life is that represented by the median for children, 3.7 hours, the Theo-dur formulations are associated with fluctuations that will permit maintenance of levels within the therapeutic range during 12-hour dosing intervals. For most children, smoking

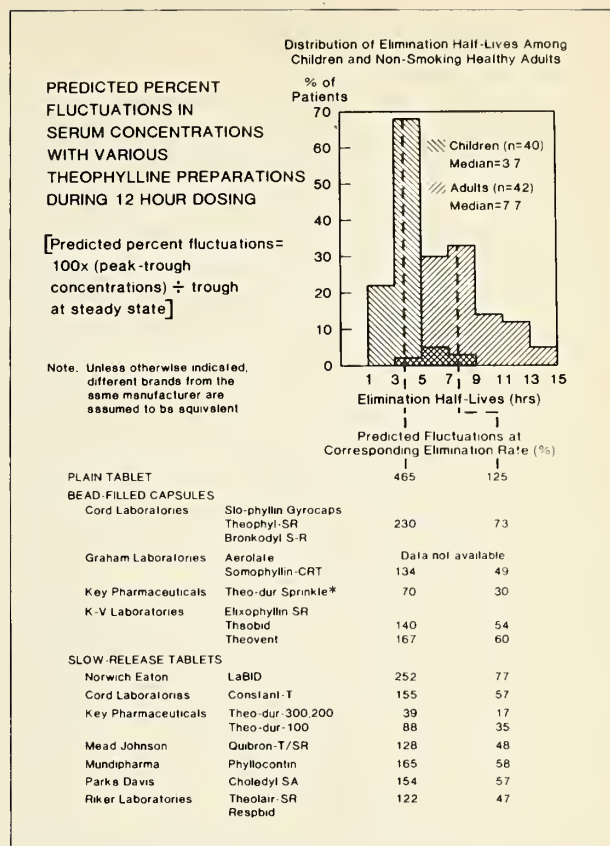


Figure 1: Distribution of elimination half-lives and the effect of different rates of elimination on fluctuations in serum concentration during 12-hour dosing for currently marketed preparations. * The percent fluctuations that are predicted from the rates of absorption for the various products are illustrated for the median elimination half-lives of children and nonsmoking adults. Twenty-five percent of nonsmoking adults have elimination half-lives of six hours or less; they and most smoking adults, who have a mean half-life of elimination of about four hours (not shown), will have fluctuations in serum concentrations that approach the value associated with the median childhood elimination rate. Fluctuations in excess of 100 percent are not compatible with maintenance of levels within the therapeutic range even if peak levels as high as 20 mcg/ml are attained; eight-hour dosing intervals are then advisable.

* Theo-dur Sprinkle is an investigational product scheduled for release in mid to late 1982.

adults, and perhaps 25% of nonsmoking adults, 8-hour dosing intervals will be needed for other products despite claims for 12-hour effect and b.i.d. dosing.

Consequently, sustained-release preparations that yield the least fluctuations in the serum concentration are preferable in the treatment of patients with chronic asthma. While some patients will do equally well with most slow-release products or even plain, uncoated

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DRUG THERAPY REVIEW

(Continued from page 497)

tablets, these patients cannot be reliably identified in advance, and the differences in cost do not appear to justify trial and error among different preparations. As new slow-release preparations enter the marketplace, the rate of absorption and consequent fluctuations in serum concentrations should be assessed in the same manner, i.e., characterization of rate and completeness of absorption,⁴ followed by prediction of fluctuations at relevant patient elimination rates.⁵ Some distributors will show clinicians only mean serum concentrations during multiple-dose studies of their product in pharmacokinetically undefined subjects. These may be misleading, however, since the mean half-life of elimination in a group of nonsmoking adults is likely to be sufficiently slow that fluctuations in serum concentration appear acceptable even when clinically important fluctuations may occur among patients with more rapid elimination.

Special consideration in product selection must be made for the infant and young child. Rates of elimination for theophylline are sufficiently slow among children under 1 year (and particularly under 6 months) that liquid formulations generally can be dosed at 8-hour intervals with acceptably small fluctuations in serum concentration. Slow-release theophylline preparations become clinically important for the majority of children by 6 months to 1 year of age. Since chewing or crushing will increase the rate of absorption for slow-release formulations, the inability of young children to swallow tablets whole requires the sprinkling of the contents of a slow-release, bead-filled theophylline capsule on a spoonful of soft food. The spoonful of medication on food should be promptly followed with a good tasting "chaser" to wash down the beads intact. The appearance of apparently intact beads in the stool is common but does not indicate lack of absorption. Somophyllin-CRT and Slophyllin Gyrocaps are available in small enough dosage increments for use in younger children. Currently marketed bead-filled capsules require 8-hour dosing for most children. An investigational bead-filled capsule, Theo-dur Sprinkle, tentatively scheduled for release in late 1982, appears to offer promise for 12-hour

dosing by the "sprinkle" technique. (See Figure 1.) When available, this product may be the preferred choice among the bead-filled capsules.

DOSAGE

Dosage required to maintain therapeutic levels of theophylline varies considerably among patients but, in the absence of other illness or drug interactions, remains stable within the same patient.^{7, 8} Low initial dosage (the lesser of 16 mg/kg or 400 mg/day) with subsequent increases, if tolerated, at 3-day intervals to age-specific mean doses (900 mg/day for adults, 18 mg/kg/day for adolescents, 20 mg/kg/day for children 9 to 12, and 24 mg/kg/day for ages 1 to 9) avoids transient caffeine-like side effects that commonly accompany initiation of therapy at higher doses.⁹ The use of this schedule prevents most adverse effects so long as serum concentrations do not exceed 20 mcg/ml. Final dosage should be guided by measurement of serum theophylline concentration. Once appropriate dosage is determined, repeat serum theophylline measurements annually are generally sufficient except during periods of rapid growth. Infants under 1 year of age require a unique dosing schedule.¹⁰

Changes in smoking habits, other drugs (e.g., cimetidine, erythromycin), heart failure, liver disease, sustained high fever, and unusual changes in dietary patterns, may change theophylline clearance and the consequent dose requirements.¹¹ Dosage should be reduced in the presence of *any adverse effects*. Routine use of 12-hour dosing intervals are appropriate only for Theo-dur; others will require 8-hour dosing for most children and many adults. Some patients with unusually rapid elimination (identifiable by very high dose requirements) will require 8-hour dosing even with Theo-dur.

CONCLUSION

Stable theophylline levels between 10 and 20 mcg/ml are highly effective for controlling chronic asthma. Of available preparations, the Theo-dur formulations are most likely to provide acceptably stable serum concentrations during a 12-hour dosing interval for most patients. For most children and many adults, other preparations will more frequently require 8-hour dosing. Costs vary among phar-

(Please turn to page 500)

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(Continued from page 498)

macies and brand names, but are under \$200 per year for an average adult dose. Where "generic" products are available, they are less expensive, but therapeutic equivalence to other formulations cannot be assumed. For patients unable to swallow tablets whole, the beaded contents of Somophyllin CRT or Slophyllin Gyrocap capsules can be swallowed intact when sprinkled on a spoonful of soft food and washed down with a beverage. — Miles Weinberger, M.D., Professor of Pediatrics, and Gary Smith, Pharm.D., Clinical Assistant Professor of Pharmacy, University of Iowa, and Leslie Hendeles, Pharm.D., Associate Professor of Pharmacy and Pediatrics, University of Florida, Gainesville.

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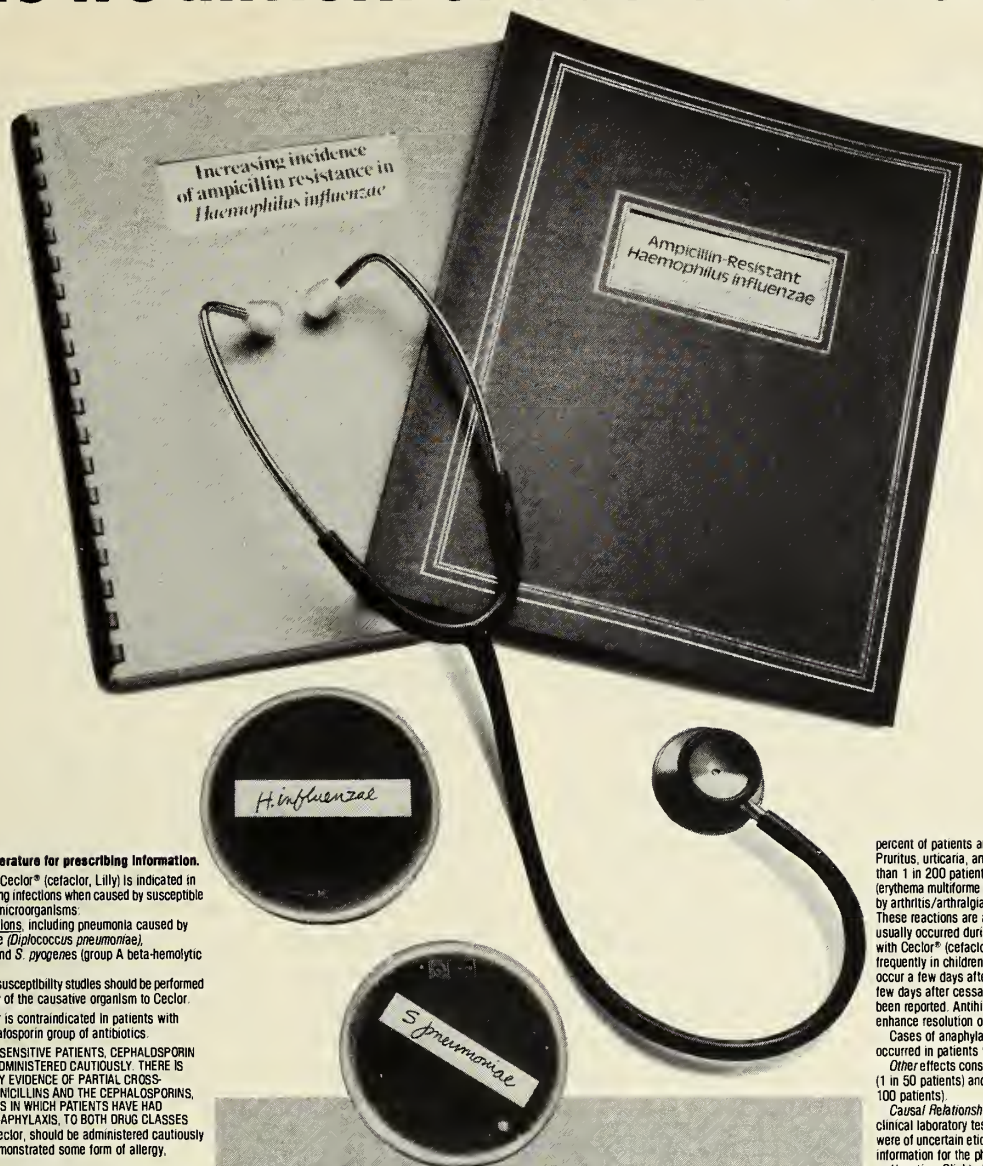
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Brief Summary.

Consult the package literature for prescribing information.

Indications and Usage: Cefclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae* (*Diplococcus pneumoniae*), *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci).

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Cefclor.

Contraindication: Cefclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Cefclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

Cefclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended. As a result of administration of Cefclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinistest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy: Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Usage in Infancy: Safety of this product for use in infants less than one month of age has not been established.

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Cefclor.

Hypersensitivity reactions have been reported in about 1.5

percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Cefclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy. Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain: Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic: Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic: Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal: Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). (100261R)

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.

Note: Cefclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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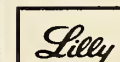
Some ampicillin-resistant strains of *Haemophilus influenzae*—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Cefclor.¹⁻⁵

In clinical trials, patients with bacterial bronchitis due to susceptible strains of *Streptococcus pneumoniae*, *H. influenzae*, *S. pyogenes* (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Cefclor.⁷

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STATE DEPARTMENT/ PUBLIC HEALTH

ALTERNATIVES TO COMMUNITY WATER FLUORIDATION

DENTAL CARIES affect 95% of the population at some point in life. Dental caries begin in the primary teeth in early childhood, affecting permanent teeth of school age children, and reach a peak in adolescence.

On the average, children 6 to 11 years get one new cavity each year, and children 11 to 15 years get one and a half new cavities each year.

However, evidence is appearing to show a declining trend in dental caries in the United States. A survey of the prevalence of dental caries in the United States was conducted by the National Institute of Dental Research in 1979-80.¹ A similar study was conducted in the 1971-73 National Health Survey and, while direct quantitative comparisons cannot be made between the two surveys, the general trend indicated a decreasing prevalence of caries. Further evidence in a recent report from the American Dental Association Bureau of Economic Research and Statistics indicates the percentage of Americans aged 30 years and older who wear one or two complete dentures dropped from 35.2% in 1960 to 24.7% in 1975.

Without doubt, community water fluoridation is the one preventive measure having had the most significant impact on dental caries in the United States. Numerous studies have documented a reduction in dental caries of 40 to 50% in primary teeth and 50 to 65% in the

permanent dentition in children drinking fluoridated water from birth.² Today, nearly 120 million U.S. citizens living in 10,000 communities have the benefits of fluoridated water.³ Thirty percent of these communities have naturally fluoridated water supplies. Currently, in Iowa, over 89% of the population is served by public water supplies with optimum levels of fluoride, nearly 19% of these from naturally fluoridated supplies.⁴

Without question, water fluoridation is the most sensible way to deliver the benefits of fluoride to children. However, over one-third of our Iowa children are being raised on fluoride deficient water. This includes children living in rural areas on private water supplies, as well as children growing up in communities that have not yet adopted community water fluoridation.

Alternatives to community water fluoridation for delivering fluorides to children can be separated into 3 categories: systemic fluorides which are ingested; topical fluorides which are placed in contact with erupted teeth; and combinations of the two.

Systemic fluoride alternatives include dietary fluoride supplements that provide decay preventive benefits. This approximates community water fluoridation if started early in infancy and continued through age 12 or 13 while the permanent teeth are mineralizing. These supplements are available in drops for infants with or without vitamins. For older children, tablets are generally prescribed. However, a major problem with dietary fluoride supplements is long term compliance with the regimen. Studies have shown when distribution of fluoride supplements is attempted on a large scale, such as through community health centers, well child clinics, and county health departments, the results suffer from poor compliance.

Studies show highest decay reductions in private pediatric practices when supplementation is started shortly after birth and continued until age 12.⁵ These successes are attributed to the select population that sees a pediatrician on a regular basis, plus the enthusiasm and dedication of the physician to motivate the parent to use the supplements over a long period of time.

The most recent dosage schedule recommended by the Council on Dental Therapeutics of the American Dental Association⁶ is de-

This information on public health matters is furnished and sponsored by the Iowa State Department of Health.

tailed in Table 1. The water fluoride content must be known for proper fluoride dosage. Physicians may obtain information on the fluoride content of Iowa communities by contacting the Dental Health Section, Iowa State Department of Health, Lucas State Office Building, Des Moines, Iowa 50319, telephone (515) 281-3733. For fluoride analysis of private wells, contact the University Hygienic Laboratory, Des Moines branch, Wallace State Office Building, East 9th and Grand, Des Moines, Iowa 50309, telephone (515) 281-5371. The University of Iowa College of Dentistry will also analyze water samples for fluoride content for physicians and dentists for a nominal fee.

It is recommended that all infants being fully breast-fed have a fluoride supplement. However, supplementation should be discontinued at the time the infant's diet is augmented with other foods if the water supply contains optimum levels of fluoride.

One effective method of providing systemic fluorides is by administering fluoride tablets in schools.⁷ However, one disadvantage is that by school age, many of the permanent teeth have completed their development and do not receive the full benefits of the fluoride. Caries reductions of up to 35% are possible in children after continuous use from kindergarten through eighth grade.

An additional systemic alternative is fluoridation of school water supplies. Various states, including Indiana, Wisconsin, Vermont, Kentucky, and North Carolina, have promoted this alternative and have a significant number of installations. Decay reductions of up to 40% are achieved with this method,⁸ which is less than community fluoridation as many of the permanent teeth are fully mineralized by the time children begin consuming the fluoridated school water supply. There are no current school fluoridation installations in Iowa. The promotion of this alternative is not a high priority in Iowa due to the lower cost-benefit ratio compared to community water fluoridation and other alternatives.

Topical fluorides may be professionally applied directly to the surface of erupted teeth in a clinical setting and also by self-applied methods. The one-to-one man power relationship between the provider and patient make professionally applied topical fluorides more applicable to private practice or direct care public funded dental programs, and are

TABLE 1
DOSAGE SCHEDULE (IN MG F/DAY) FOR DIETARY FLUORIDE SUPPLEMENTS ACCORDING TO FLUORIDE CONCENTRATION OF DRINKING WATER AND AGE

Age (Years)	Concentration of Fluoride in Water (ppm)		
	Less Than 0.3	0.3 to 0.7	Greater Than 0.7
Birth to <2	0.25	0	0
2 to <3	0.50	0.25	0
3 to 13	1.00	0.50	0

Council on Dental Therapeutics, ADA, 1979.

not a realistic alternative.

Self-applied fluoride methods include: 1) fluoride mouthrinsing; 2) toothbrushing with fluoride gels and prophylaxis pastes; 3) gel tray applications; and 4) fluoride dentifrices.

Studies have shown that frequent rinsing with dilute solutions of fluoride are effective at reducing dental caries. At the present time, over 9 million children across the country are involved in these programs.³ In Iowa, over 40,000 school age children are rinsing weekly with fluoride mouthrinses. A 25 to 40% reduction in dental decay can be achieved with these rinses which are targeted primarily for fluoride deficient communities.^{9, 10}

Fluoride dentifrices can generally be expected to reduce caries by 20 to 25%. Currently, about 80% of all dentifrices sold in the U.S. contain fluoride.

Toothbrushing with fluoride prophylaxis pastes and gels can result in a reduction by up to 25% and are adaptable to school-based programs. Gel tray applications in custom-fitted trays are very effective, up to a 55% reduction, but are not feasible as a public health measure.³

Accumulating evidence indicates that combinations of various fluoride procedures result in additive dental decay benefits. A 3-year study completed recently in Des Moines,¹¹ fluoridated since 1959, showed that the school fluoride mouthrinses were effective in reducing dental caries and that these reductions were in addition to what had already been achieved through community water fluoridation. The National Institute of Dental Research studied children in a rural area that consumed daily fluoride tablets at school, rinsed weekly with fluoride, and brushed at home with a

fluoride dentifrice. Dental caries reductions were greater than expected for either preventive therapy alone.³ Additional research is indicated as to which combinations of fluoride procedures are most effective and most economically applied.

Fluoridation remains the method of choice to deliver the proven benefits of fluoride to children today. However, where engineering problems or local political considerations make fluoridation not feasible, effective alternatives are available to reduce the pain, expense, and loss of teeth due to dental caries.

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October 1982 Morbidity Report

Disease	Oct. 1982 Total	1982 to Date	1981 to Date	Most Oct. Cases Reported From These Counties
Amebiasis	9	67	18	Johnson, Boone, Muscotine
Brucellosis	2	5	4	Benton, Tomo
Chickenpox	159	6050	7245	Polk, Linn, Block Hawk
Compylobacter	49	288		Dubuque, Scott, Polk
Cytomegalovirus	2	38	27	Block Hawk, Johnson
Eoton's Agent infection	40	232	32	Polk, Linn, Scott
Encepholitis, viral	10	42	25	Block Hawk, Apponoose, Corroll
Erythemo infectiosum	0	247	1162	
Gastroenteritis (GIV)	1354	9816	14252	Polk, Linn, Block Hawk
Giordiosis	31	142	110	Polk, Polo Alto, Johnson
Hepotitis, A	9	73	193	Polk, Keokuk, Greene
Hepotitis, B	7	78	81	Johnson, Polk, Page
Hepotitis, Non A-B	4	16		Boone, Dubuque, Linn
Hepotitis type unspecified	4	27	51	Johnson, Dubuque, Soc
Herpes Simplex	61	391	209	Johnson, Polk, Linn
Herpes Zoster	0	10	7	
Histoplosmosis	1	15	12	Story
Infectious mononucleosis	27	166	238	Linn, Marshall, Block Hawk
Influenzo, lob confirmed	0	74	191	
Influenzo-like illness (URI)	4382	34132	55065	Linn, Johnson, Pottowottomie
Legionellosis	1	21		Block Hawk
Molorio	1	7		Polk
Meningitis oseptic	20	75	70	Scott, Johnson, Polk
bacterial	15	138	107	Polk, Clinton, Cloy
meningococcol	3	12	25	Bueno Visto, Cloy, Polk
Mumps	3	34	63	Block Hawk
Pertussis	2	8	6	Chickosow, Pottowottomie
Robies in animals	30	347	778	Polk, Butler, Benton
Reye Syndrome	0	5		
Rheumatic Fever	0	3	8	
Rubello (German meosles)	0	0	4	
Meosles	0	0	1	
Solmonellosis	47	278	228	Dubuque, Linn, Johnson
Shigellosis	8	59	32	Polk, Crawford, Linn
Toxic Shock Syndrome	1	16		Poweshiek
Tuberculosis total ill	10	66	71	Polk, Linn, Tomo
bact. pos.	8	49	45	Polk, Linn, Tomo
Typhoid Fever	0	1		
Venereal diseases: Gonorrheo	497	3950	4397	Polk, Scott, Block Hawk
Syphilis	3	27	24	Scott, Union

Laboratory Virus Diagnosis Without Specified Clinical Syndrome: Adenovirus — 1, Johnson, 1, Polk; Hookworm — 1, Scott.

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ABOUT IOWA PHYSICIANS

Dr. C. W. Seibert, longtime Waterloo obstetrician and gynecologist, has closed his private practice and has joined the staff of the Black Hawk Area Family Practice Resident Training Program as instructor in obstetrics and gynecology. Dr. Seibert will continue to see private patients in his new position at the Black Hawk Area Family Practice Center.

At the 1983 Iowa State Fair, **Dr. Loran E. Coppoc**, Ottumwa, was named to the Saddlehorse Hall of Fame. Dr. Coppoc has bred and trained both Morgan and Arabian horses for many

years. . . . **Dr. David Hilger** recently joined Drs. Ray Schmael, Keith Lacey, Cheung P. Pun and Roger Vogt in Fort Dodge. Dr. Hilger received the M.D. degree at the University of Nebraska School of Medicine and served his radiology residency at the University of Nebraska Medical Center in Omaha. . . . **Dr. Clyde Lindquist** recently was appointed director of the Emergency Department at Trinity Regional Hospital in Fort Dodge. Dr. Lindquist received the M.D. degree at the U. of I. College of Medicine and served his surgery residency at Peter Bent Bingham Hospital in Boston, Mass. From 1974 to 1978, he was a clinical fellow instructor in surgery at Harvard University. . . . **Dr. Kenneth J. Printen** recently joined the medical staff at Mercy hospital in Iowa City. Dr. Printen was formerly a professor in the Department of Surgery at the U. of I. College of Medicine. . . . **Dr. Barbara G. Sickler** has joined Drs. James K. Coddington and Paul H. Gordon in family practice in Mason City. Dr. Sickler received her medical education at the Des Moines College of Osteopathic Medicine and Surgery and completed her family practice residency in Mason City.



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Dr. Vern Gottleaber and **Dr. Pedro Atienza** recently joined the staff of Medical Associates in Maquoketa. Dr. Gottlaeber received his medical education at the College of Osteopathic Medicine and Surgery in Des Moines and interned at Waldo General Hospital in Seattle, Washington. Dr. Atienza received his medical education at the University of Santo Tomas in Manila, Philippines, and completed his surgery residency at Veterans Hospital in Des Moines. . . . **Dr. Dianne McConnell** will join Waukon Medical Associates early next year. Dr. McConnell received her medical education in Ontario, Montreal and England. Currently, Dr. McConnell is serving as a traveling doctor in Newfoundland and Labrador. . . . **Dr. Larry Heikes** has joined **Dr. Brad McConville** in family practice in Centerville. Dr. Heikes received the M.D. degree at the University of Miami Medical School in Florida and completed his family practice residency at U. of I. College of Medicine. . . . **Dr. Deepak Midha**, Creston, recently joined the Iowa Air National Guard and is assigned to the 132nd TAC Hospital. As a Guard physician, Dr. Midha will be on duty two days each month and will attend either the flight surgeon's school or go on deployment for two weeks each year. He will continue his private surgical practice in Creston.

At a recent national leadership forum of the American Academy of Pediatrics, **Dr. Peter D. Wallace**, clinical assistant professor, Department of Pediatrics, U. of I. College of Medicine, was elected alternate chairman of AAP District VI. District VI encompasses nine midwestern states and two Canadian provinces. Dr. Wallace will serve a three-year term. **Dr. Stanley I. Levine**, Ottumwa, was elected chairman of the Iowa chapter of AAP. Dr. Wallace formerly held this position. Dr. Levine is chief of pediatrics at both Ottumwa and St. Joseph Hospitals and a clinical assistant professor in the Department of Pediatrics at the U. of I. College of Medicine. . . . **Drs. Renald and Jean-Guy Bernard**, brothers who have been in general practice in St. Georges, Quebec, Canada, recently notified the Hamilton County Hospital of their intention to begin medical practice in Webster City next summer. Both received their medical education at Laval University in Quebec.

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Dr. John H. Brinkman, Mason City, recently received the Iowa Health Care Association's 1982 Distinguished Service Award. Dr. Brinkman was cited for his involvement with the Iowa Foundation for Medical Care. . . . The medical library at Waverly Municipal Hospital has been named in honor of **Dr. Herbert W. Rathe**, longtime Waverly physician. A plaque noting the honor recently was presented to Dr. Rathe by the hospital board of trustees. . . . **Dr. H. William Fischer** has been named college physician and director of health service at Luther College in Decorah. Dr. Fischer received the M.D. degree at the University of California School of Medicine in San Francisco and interned at Wayne County Hospital in Detroit, Michigan. Prior to locating in Decorah, Dr. Fischer was an emergency room physician at Mason City's St. Joseph Mercy Hospital and in private practice in Elkader. In addition to his duties at Luther College, Dr. Fischer plans to open a private practice in Decorah. . . . **Dr. Paul Ferguson**, Lake City, recently was named president-elect of the American Cancer Society, Iowa Division. Dr. Ferguson, who is also

chairman of the professional education committee of the Iowa division and a member of the executive committee of the board of directors, will assume presidency of the Iowa division in 1984. . . . **Dr. David G. Paulsrud**, Sioux City, and **Dr. John A. Walck**, LeMars, recently participated in a holistic health care workshop for RN's and LPN's at Briar Cliff College. Dr. Paulsrud discussed the historical basis for the concept of holistic care and Dr. Walck spoke on the "nuts and bolts" of holistic medicine.

Dr. James Eaves recently began family practice in Clarinda. Dr. Eaves received the M.D. degree at the University of Tennessee College of Medicine and interned at St. John's Hospital in Tulsa, Oklahoma. For the past 10 years, he has been in private practice in Florence, Oregon. . . . **Dr. Garold L. Moyer** recently joined **Drs. Richard Honderick** and **Steve Ferguson** in family practice in Rock Rapids. Dr. Moyer received the M.D. degree at the U. of I. College of Medicine and completed his family practice residency at University Hospitals in Iowa City.

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Costs Rank Among Iowans

FURTHER CONFIRMATION was given to Iowa citizen concern over the cost of health care in findings of an independent public opinion survey released November 17 by the Iowa Medical Society.

In choosing among four responses, 69% of the Iowans surveyed believe that *cost* is the main problem facing health care and medicine. In a corresponding national sample, 62% of those asked said *cost* was their highest concern.

The remainder of the Iowa respondents ranked *quality* (10%), *access* (6%) and *other* (15%) far behind *cost*.

This public opinion survey was done in August by the New York-based research organization of Kane, Parsons and Associates, Inc. The study was conducted under the auspices of the Iowa Medical Society and the American Medical Association.

In line with the cost topic, 77% of the Iowans surveyed said they were either *very* or *fairly* confident they have enough money or insurance to pay for usual medical costs a family requires. And 61% said they are confident about paying for a major illness. This compares to national percentages of 72 and 59, respectively.

Confidence in ability to pay both usual and major medical costs among persons earning less than \$10,000 annually is higher in Iowa than across the country. Only 23% of the Iowans in this category are not confident they can pay for a major illness as compared to 34% in the national sample.

The extensive 1982 survey of Iowa citizen attitudes toward medical care and life-style included among its findings:

- 46% said "too much" money is spent on national defense, as compared to 21% who said "too much" is spent for health care.

- 60% said the number of Iowa doctors is about right; 34% said there are not enough.

- 94% expressed overall satisfaction with the way they were treated the last time they saw a medical doctor about themselves. Interestingly, rural residents are more satisfied than their urban counterparts.

- 88% said they had a personal physician, with 34% reporting their physician is a solo practitioner, and 64% indicated having a doctor who is part of a group practice.

- In selecting and keeping a personal physician, 95% ranked knowledge of medicine very important; only 32% assigned high importance to the doctor's fees.

- 87% said most doctors are genuinely dedicated to helping people.

- 56% said people who sue doctors for malpractice are just looking for an easy way to make money; 35% said such people are usually justified in taking such action.

- 55% said hospitals deserve a lot of responsibility for rising health care costs; 49% said the same for insurance companies and drug companies; 42% said doctors deserve such responsibility.

A concluding section of the survey asks Iowans about personal health and lifestyles. It acknowledges that most citizens know (in most categories higher than the national sample) the importance of reduced salt consumption; the need for vigorous exercise; the value of bulk or fiber in the diet; the benefits of abstinence from tobacco; the good from maintaining a satisfactory weight level, and the importance of moderation in the consumption of alcohol.

It appears a reasonably high percentage of we Iowans know what constitutes a healthy lifestyle. Unfortunately, however, we may not attach sufficient personal importance and attention to it. Thus, we still need to promote education and motivation programs in this area. Success here could do much to stabilize or reduce the costs being paid by Iowans for their health care.

More data from this comparative study of the Iowa and U. S. populations will be compiled and presented in a near-future issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY.

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